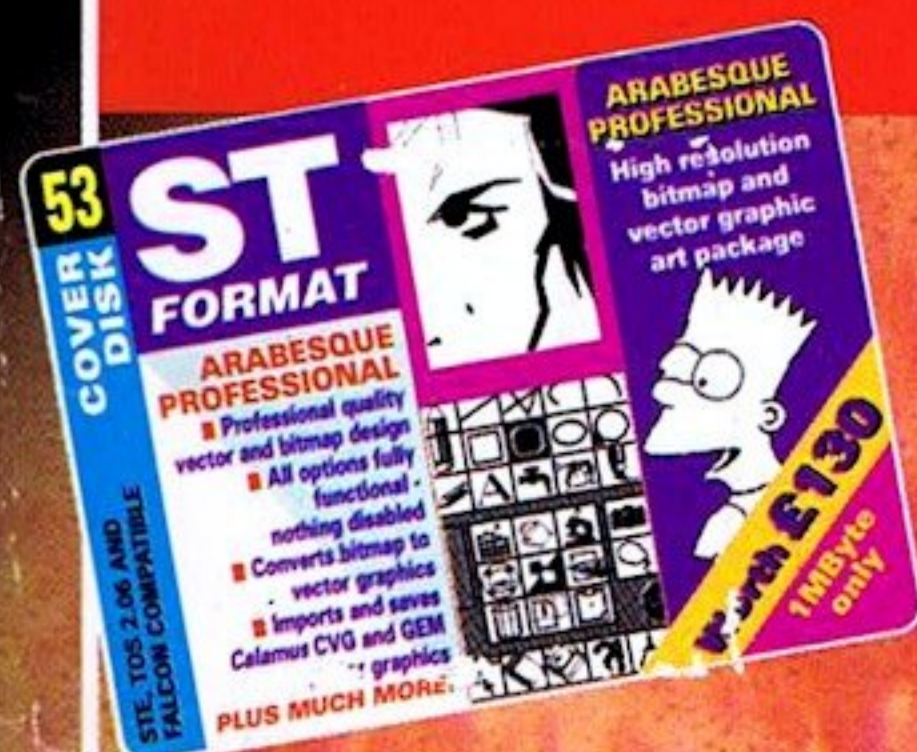


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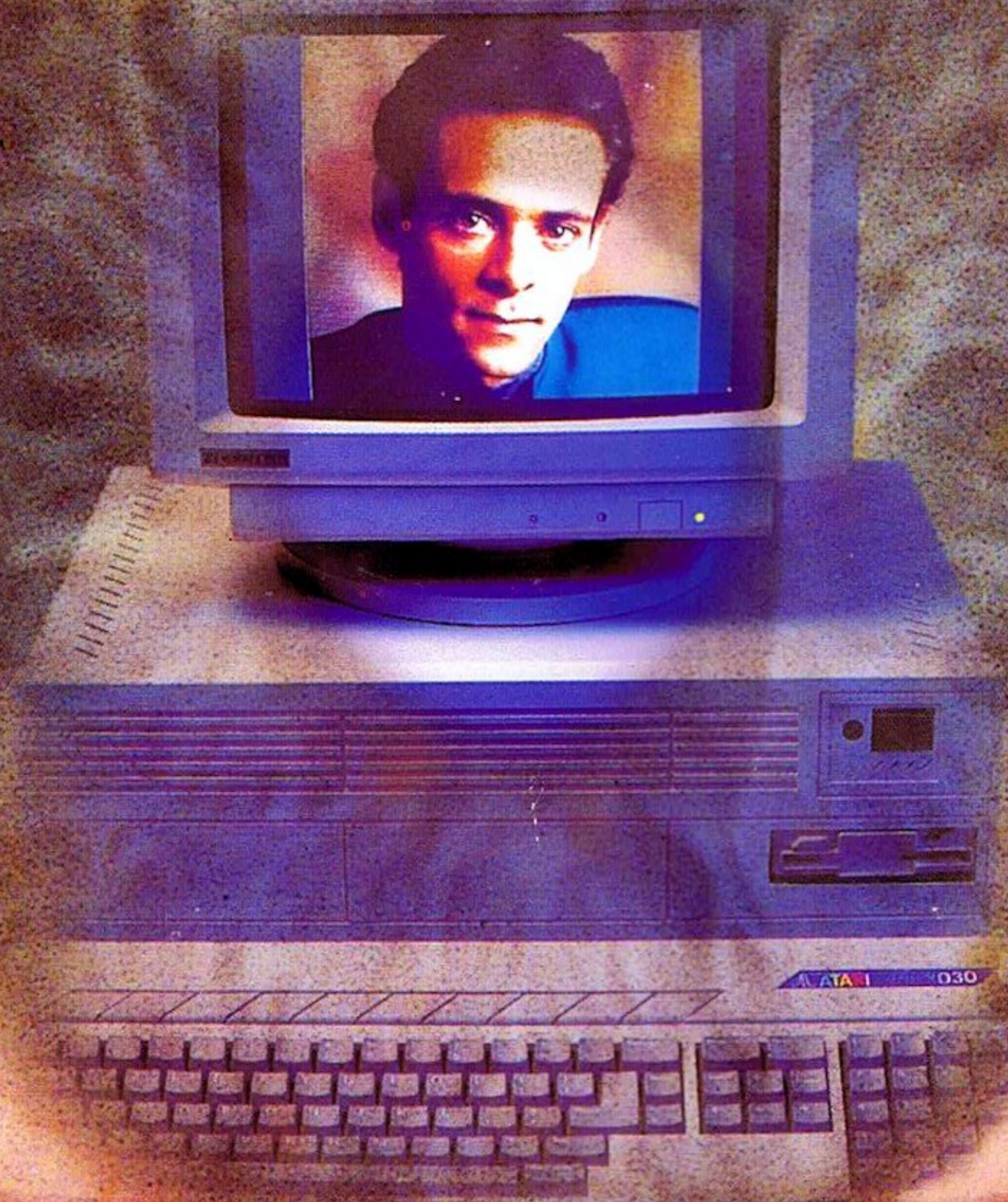
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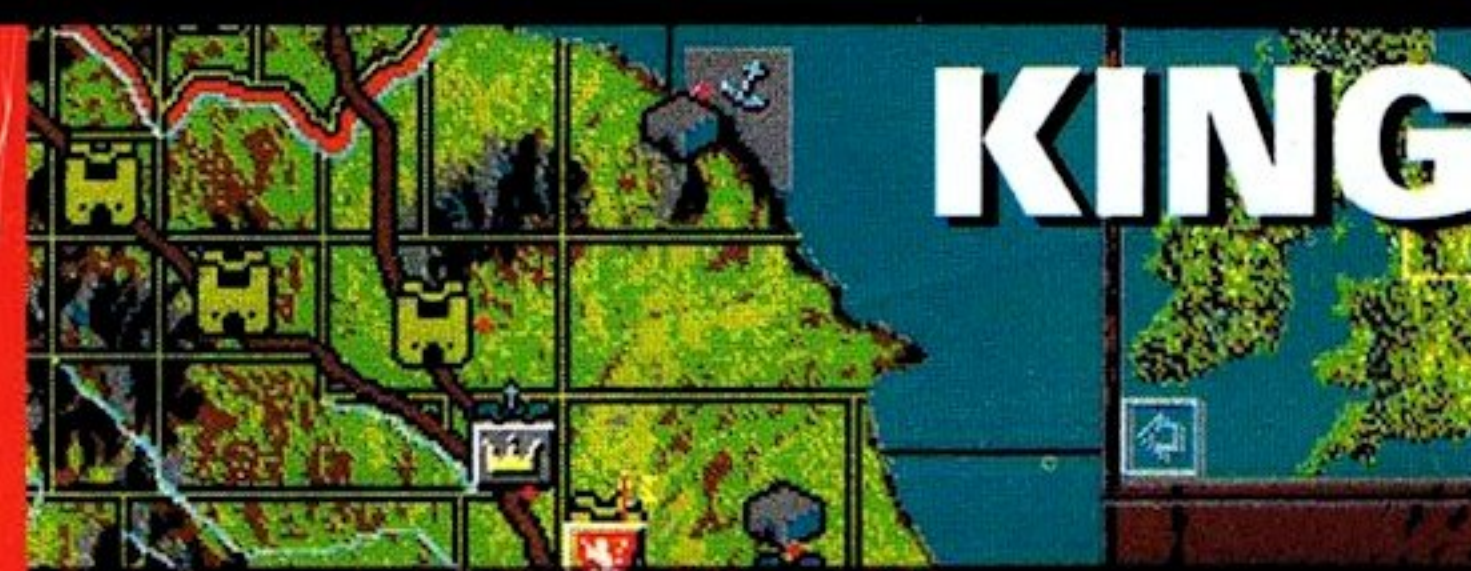
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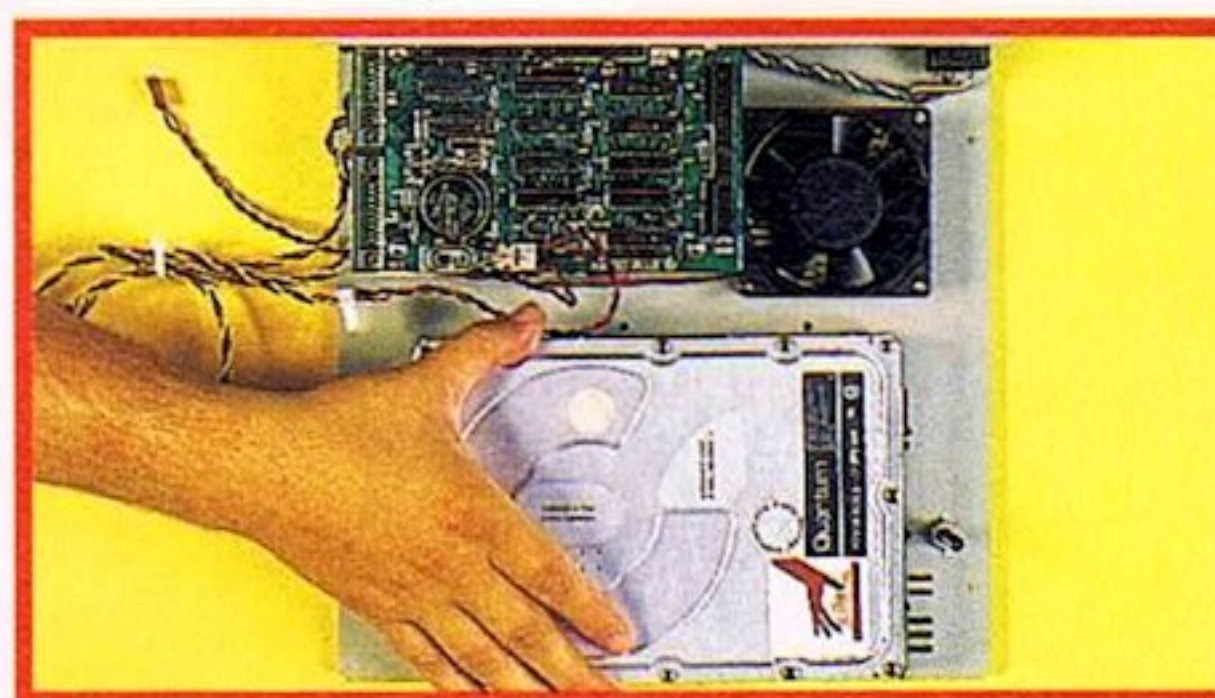
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the way
forward
with the
Falcon on
page 25**

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they are on
page 31**



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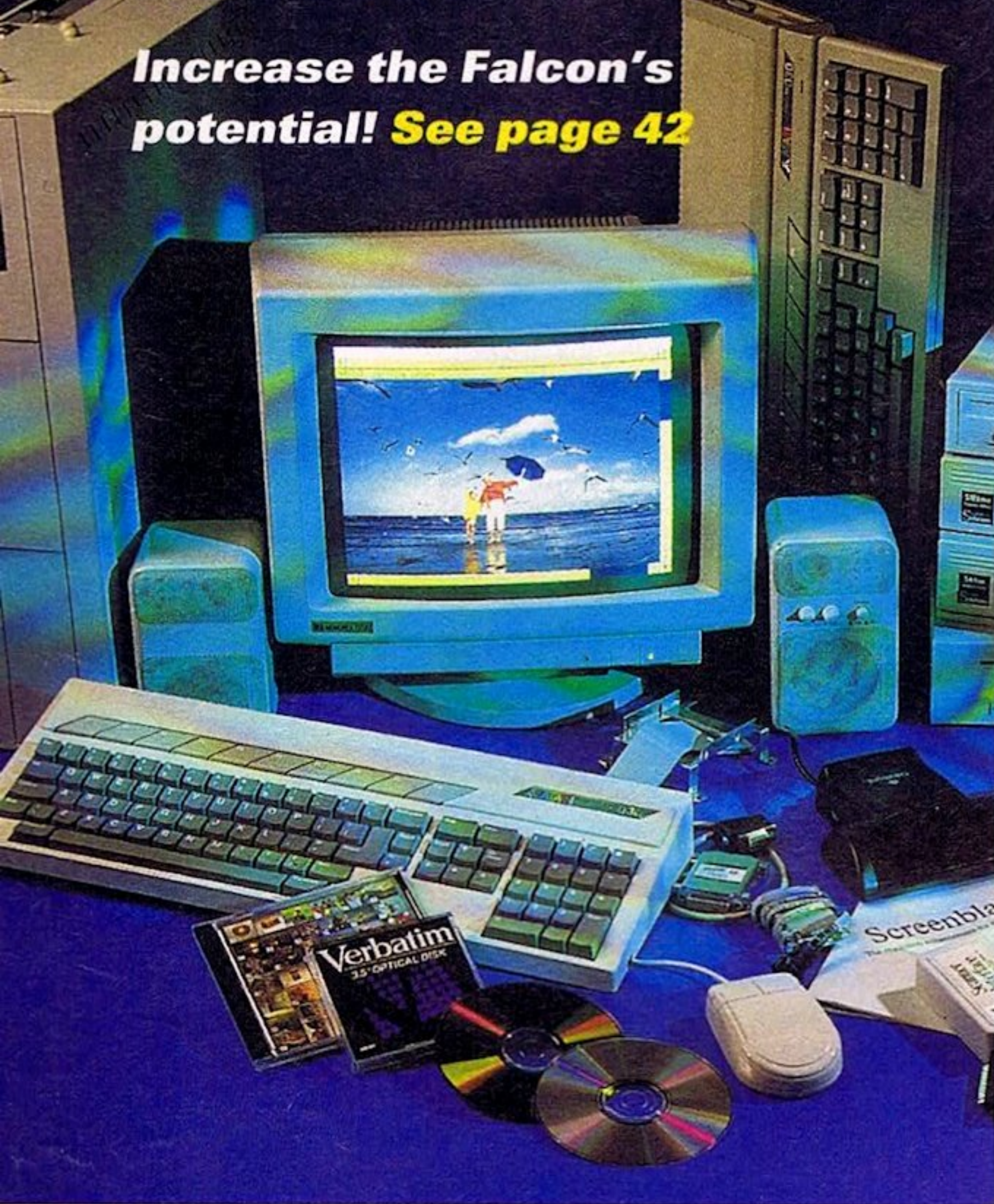
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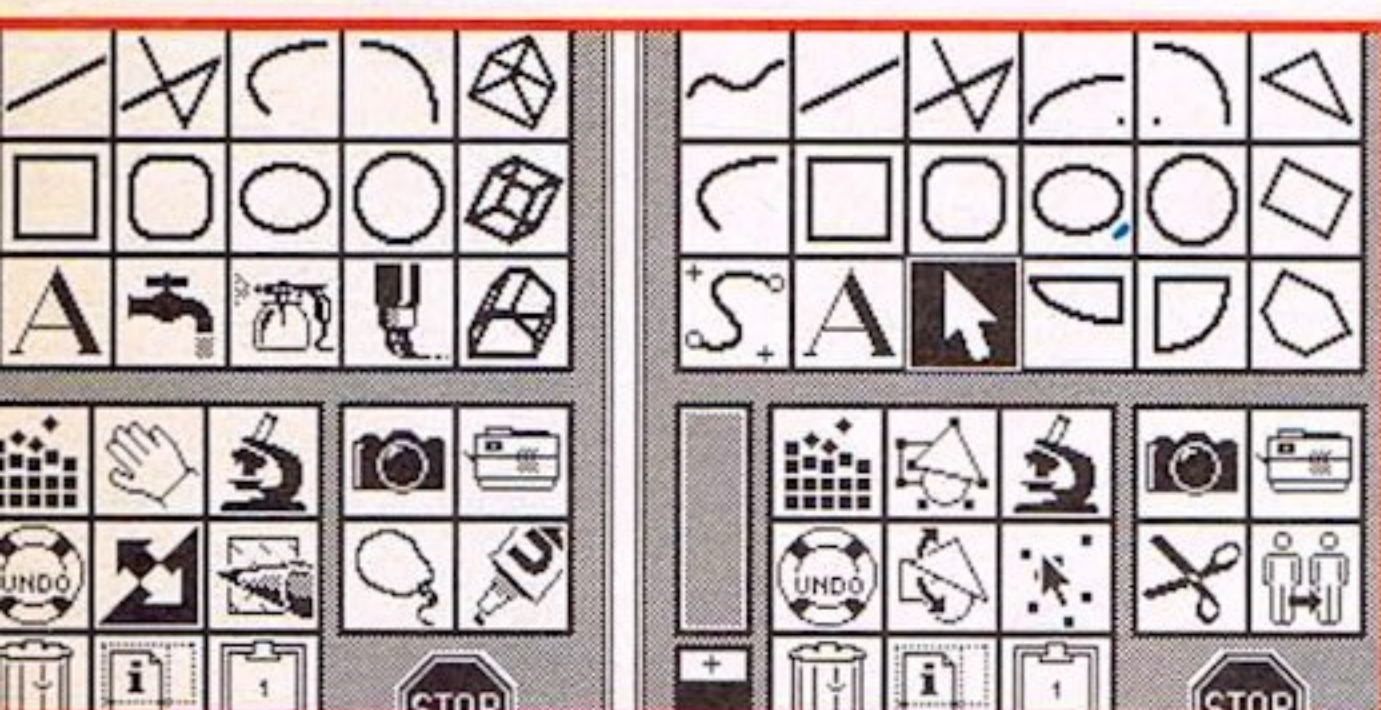
HARDWARE

Increase the Falcon's potential! See page 42



THE CLASS OF '93

A handy index of the games, hardware and software we've reviewed over the last 12 months - see page 97



Arabesque - the complete version of this amazing vector graphics program

TURN TO PAGE 19
FOR YOUR DETAILED
COVER DISK GUIDES



Paula Richards,
EDITOR

ST FORMAT ■ ISSUE 53 ■ DECEMBER 1993

WELCOME TO ST FORMAT

The Falcon's been around for the best part of this year, albeit in limited quantities, but now - at last - it's available country-wide, there's a plethora of software available for it that's unlike anything you've seen before for your

ST and there are loads of hardware enhancements you can get for it to make even more of it. Finally it's time for you to seriously consider whether you want to part with your cash for one of these machines you've heard so much about. Forget "if you understand this then you understand the Fal-

con." We tell you here in straight terms exactly what you need to know about the machine so you can decide for yourself whether you want one. Turn to page 25 to start with. To tie in with this, we've also got reviews of the long anticipated *Studio Photo* (page 46), *VideoMaster Falcon* (page 38) and *Digitape* (page 48).

As well as all this in-depth investigating, we've also got an incredible Cover Disk for you including the vector graphics program *Arabesque* - worth a massive £130. And one of the great things about it is that you can use it in conjunction with last month's *Wordflair* - what a bargain!

Have a great month.

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More Good News from Microdeal



Music

Clarity Falcon

New

Clarity Falcon is based on our highly successful Replay 16 sound sampler and is our premier, professional, direct-to-hard disk sample editor system. The package includes extensive software; a memory-based & a disk-based editor with many editing and effects features, a Midiplay MIDI keyboard/sequencer controller, a Drumbeat sample sequencing program with MIDI synchronisation control and more. Extra hardware is also provided to handle CD (44.1kHz) and DAT (48kHz) sample rates and to allow line-level stereo signals to be connected to your Falcon. Sampling to disk permits rates of up to 50 kHz stereo!

Music MultiPack

Offer

An 8-bit stereo sound sampler? A 4-voice polyphonic music synthesiser? And a complete MIDI sequencer? In one package??

Yes! This pack contains *StereoMaster*, *Quartet* and *Concerto* to give you a complete music solution at a tremendous price. With this pack you can compose and arrange your own music, choose from over 100 musical instruments & sounds or sample your own and, optionally, control the whole system from your favourite MIDI instrument. Everything is there, including over 200 pages of quality documentation.

General

Home Office Pack

Offer

Another brand-new package deal from Microdeal. A quality spreadsheet (*K-Spread 2*), a complete home finance package (*Personal Finance Manager Plus*) and the ultimate suite of essential utilities (*Harlekin 2*). All in one pack, with full documentation, at an incredible bargain price!

Video

New



VideoMaster Falcon

VideoMaster combines the beauty of a video digitiser, the fun of a sound sampler and some superb sequencing software to provide a true *Multimedia* system that is a joy to use. This is the *one* package that you need for producing high quality stills & 25 frames/second movies with sound!

New Falcon030 version. Previously, VideoMaster was Falcon compatible - now we have enhanced the hardware and software so that Falcon owners can work with this amazing package and enjoy brand-new features such as superb True Colour 640x400 digitised stills together with 160x100 25 frames per second monochrome video with 16 bit stereo sound! VideoMaster Falcon is supplied with a brand-new manual, many example pictures/films and every copy comes with a free TruePaint package!

ColourMaster

New

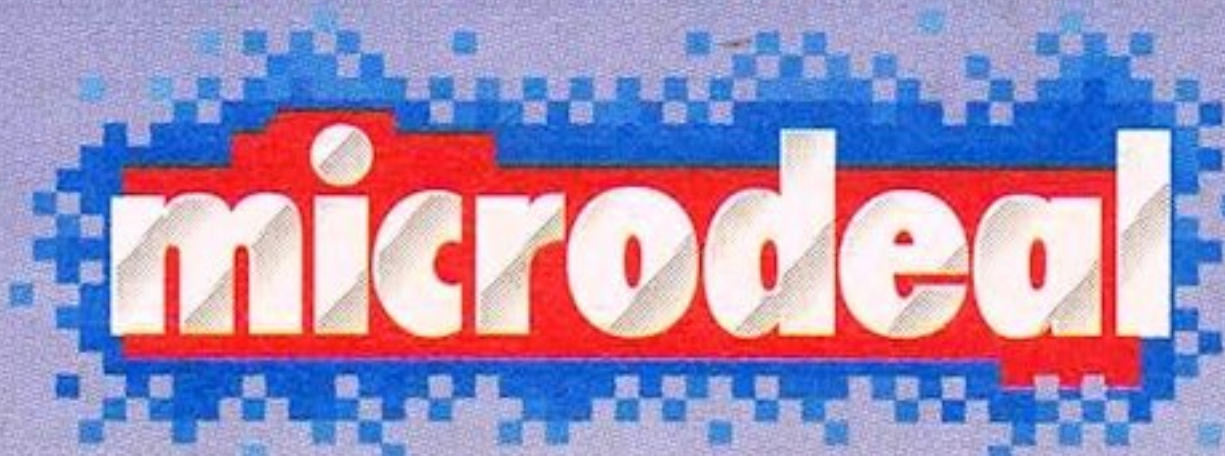
To complement the VideoMaster system, we have developed a high quality RGB colour splitter which allows you to automatically digitise full colour movies/stills, directly from the VideoMaster software. The splitter is packaged with VideoMaster RGB.

The picture above is an un-retouched shot taken outside Microdeal's offices with a Panasonic camcorder and digitised with ColourMaster and VideoMaster Falcon, all within a few seconds!

Prices

Clarity Falcon	£99.95
VideoMaster Falcon	£99.95
VideoMaster RGB	£139.95
ColourMaster	£69.95
Music MultiPack	£49.95
Home Office Pack	£49.95

Phone 0525 713671 to order any of these titles using your credit/debit card



All Microdeal products should be available from your local Atari computer shop. In case of difficulty, you can order directly from Microdeal using your credit/debit card over the phone or by sending us a cheque/postal order. For more information on any of our products which includes HiSoft software (e.g. Devpac Atari 3, TruePaint, Superbase Professional etc.), please call Microdeal on +44 (0) 525 713671, or fax us on +44 (0) 525 713716 or write to us at: The Old School, Greenfield, Bedford MK45 5DE UK.

Top marketing man joins Atari

by Clive Parker

Atari have appointed a new marketing manager in the US specifically to promote the new Jaguar 64-bit console, lending more strength to Atari's claims that they're taking the machine extremely seriously.

Terry Valeski joined Atari US as Vice President of marketing with his main brief being the promotion of the Jaguar in the US. He has a background in advertising and marketing and reports directly to Atari's president Sam Tramiel, who commented; "We are very pleased that Terry has joined Atari. His experience is invaluable to us. Developing strong relationships

"We are very pleased that Terry has joined Atari. His experience is invaluable to us"
Sam Tramiel

with retailers and developers as well as communicating with consumers will be critical to our success as we get ready to market and distribute the Jaguar worldwide."

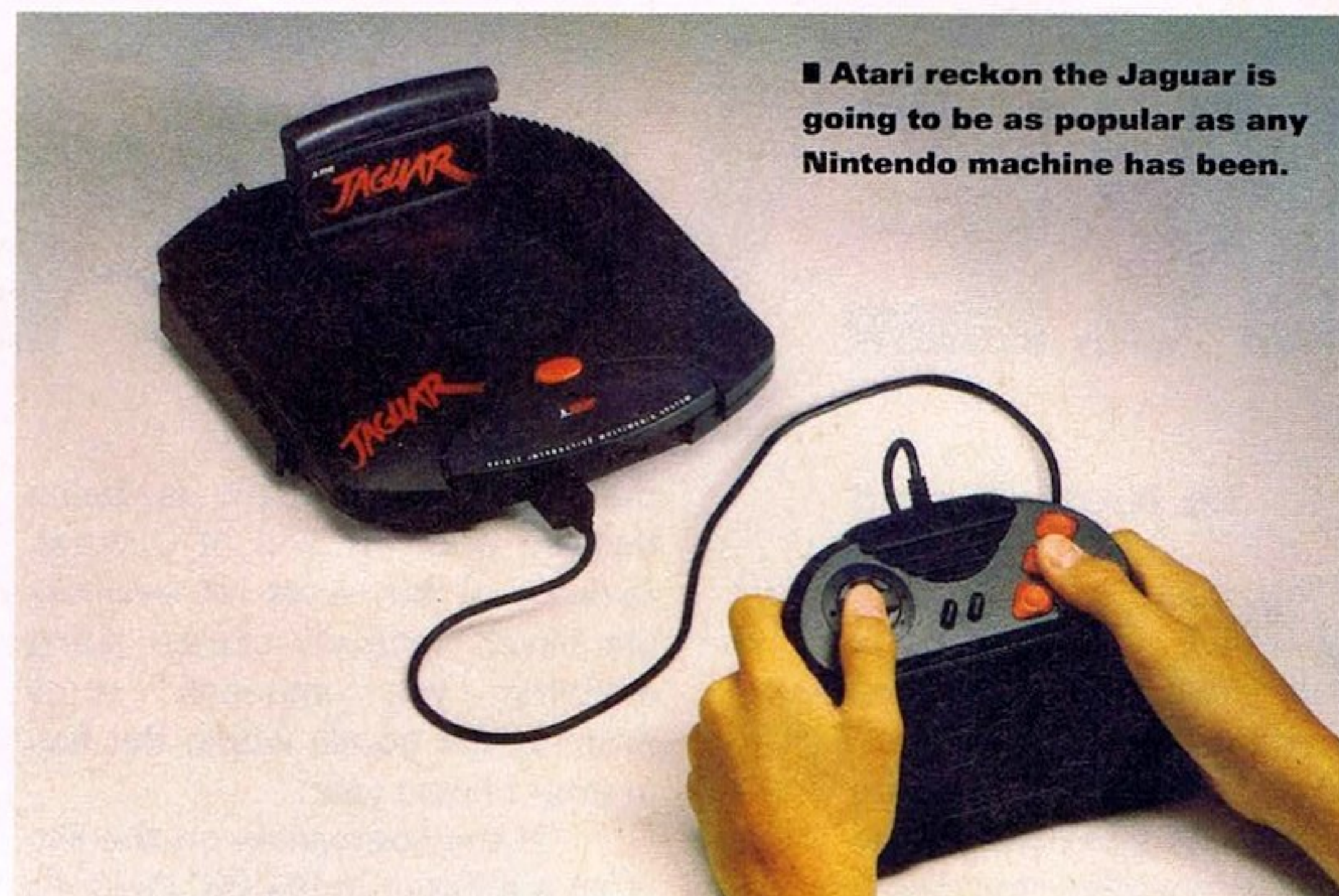
This valuable experience includes 22 years of experience in the consumer electronics industry,

spending 11 years in advertising in New York and San Francisco, followed by four years as a senior vice president for a company marketing consumer products.

In 1982 he joined Mattel Intellivision to head up the Intellivision games console division and in 1984 he bought Intellivision from Mattel and started his own company, INTV Corporation. For the next eight years Valeski acted as president and CEO of INTV Corp concentrating on game development, the company was also a Nintendo licensee developing games for the NES console.

Valeski's main brief now is to launch the Jaguar in the States and, as all good marketing types should be, he's right behind the product: "The Jaguar gives Atari the opportunity to establish itself on the world market in the same way that Nintendo did in 1985 when they launched the NES, leading to Nintendo becoming the multi-billion dollar company it is now. With the leap in technology of the 64-bit console, coupled with our aggressive marketing of the Jaguar, Atari will achieve the same impact on the market as Nintendo did. The Jaguar has capabilities beyond anything else on the market or under development."

He suggests that 3DO, their nearest competitor who have something actually available now, will have "no effect on Jaguar whatsoever," attributing this cer-



■ Atari reckon the Jaguar is going to be as popular as any Nintendo machine has been.

tainty to the competitive price point of the Jaguar – "If someone is willing to spend \$700 on a 3DO machine, then they'll be thrilled to get a more powerful machine for just \$200." Valeski goes on to

"With the leap in technology... Atari will achieve the same impact on the market as Nintendo did"

explain that he anticipates US sales of Jaguar software and hardware by the end of next year will easily exceed their \$400 million value

projection: "That figure is the low end of our scale, we think that the demand for the Jaguar will easily exceed these figures in the first year." Indeed, their strategy does seem to be to stir up excessive demand before they can actually meet it – in the States they are planning a full range of PR events in shops and malls with interactive hardware displays and a full press and TV campaign centred around supply of machines in New York and San Francisco – and it'll only be as more machines roll off the production lines that the campaign is to widen throughout the world. Valeski confirmed, however, that we can expect to see Jaguars in the UK before the end of the year... so there's something to put on your Christmas list!

SNIPPETS

Travelling warehouse

PD Warehouse have moved to north London after being taken over by the proprietor's own brother, Andrew Weaver. All enquiries relating to the PD library should now be made to PD Warehouse, 181a Brecknock Road, London N19 5AB or you can call them on ☎ 071 267 3308.

Proteus = Teespro

Proteus Communications have changed their name to Teespro Music to prevent any confusion with the Proteus sound module from EMU Systems in the USA. EMU Systems are worried that their hardware may

be confused with the classical MIDI files supplied by the former Proteus Communications and requested a change of name.

The address for Teespro Music remains the same and the change does not affect any of the products or services supplied by Teespro. Call Jon Halton on ☎ 0642 300903 with any queries.

Cat and mouse

If you want a more accurate way of drawing pictures in a graphics package then you need Tabby, a mouse replacement system that plugs into the serial port of your ST. It's not a

brush mouse – it's a miniature graphics tablet and pen system that costs just £49.95. Tabby is fully compatible with all ST mouse driven software, and because it uses the serial port you can still use the mouse at the same time if you want.

The Tabby is available from Calamus suppliers, JCA Europe (☎ 0734 452416) in both ST and PC versions – so remember to state which machine you want drivers for when you're ordering your new pussy.

Protar drives return

Analogic Computers have acquired all rights for Protar hard drives for

the ST and Falcon, this means that the drives are now built in the UK but are still marketed under the Protar name.

The drives are available exclusively from Analogic until Christmas at special introductory prices, and from other Protar dealers next year. If you already have a Protar Series 2 drive you've got the opportunity to update your software at a nominal charge direct from Analogic.

Prices start at £299.95 for the Series 2 85DC, £339.95 for the 127DC and £369.65 for the 170DC. All of the drives use Quantum mechanisms with cache. Call Analogic on ☎ 081 546 9575.

JAGUAR DEVELOPERS REVEALED

by Andy Nuttall

Details are emerging about the growing number of developers for Atari's forthcoming Jaguar console. *ST FORMAT* can reveal that there are a healthy 24 companies, who either have or are expecting development kits in the near future.

Atari have a TT-based development system available now, but

their PC-based system is being delayed until the end of October. Because of this, most UK developers haven't actually started doing anything yet, although some promise the goods within the first quarter of next year.

Of the companies on the list, eight are based in the UK. Oxford's Rebellion Software are the brains behind the much-vaunted *Chequered Flag 2* and *Alien vs Preda-*

tor titles. As well as these two well-known games, they also have an adventure and a flight simulation

"When we've shown people the games, a couple of them have said 'Where's the CD drive?' but there isn't one!"

under development. Rebellion's creative director, Jason Kingsley, is enthusiastic about what they've done

with the machine: "When we've shown people the games, a couple of them have said 'Where's the CD drive?' but there isn't one!"

Jason thinks that the quality of the games will improve with time, as programmers get used to the technology. "Games will take on a whole new level. I think we'll be able to do twice as much as what we're doing at the moment. The performance of the Jaguar outstrips the top-end 486s, but it will take time for programmers to use it fully. It's a very exciting platform to develop on - the whole package smacks of quality."

Anco Software are currently considering two titles, *Kick Off* and *World*



■ *Brutal Football* is exactly that - pretty brutal. This is injury time, where the ball disappears and you use your opponent's heads to score instead...



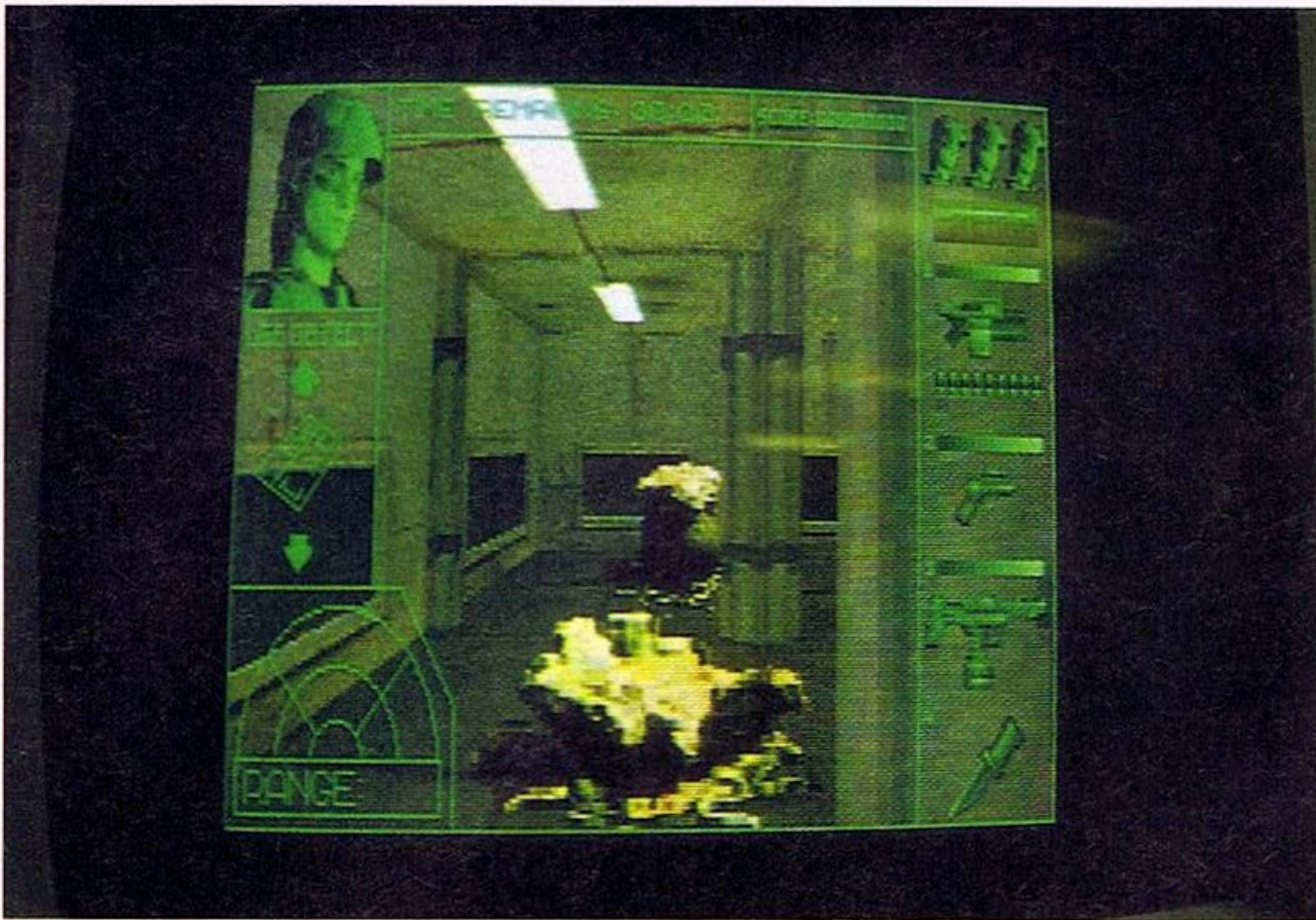
■ *Chequered Flag 2* by Rebellion

Software is the "Ultimate Driving Game," apparently. Yeah, they all say that - but even in the development stages this looks pretty good.

Cup. Anil Gupta of Anco is very positive about the Jaguar. "In my own mind, I think it will definitely succeed," he says. "It is a very good machine. Like everybody else, though, we're waiting for a

All those developers...

Anco Software	UK	Millennium Interactive Ltd	UK
Beyond Games Inc	US	Ocean Software Ltd	UK
Dimension Technologies	US	Rebellion Software	UK
Eurosoft	GERMANY	Retour 2048	FRANCE
Gremlin Graphics	UK	Silmarils	FRANCE
High Voltage Software	US	Telegames Inc	US
Krisalis Software	UK	Tiertex Ltd	US
Loricel S.A	FRANCE	Titus	FRANCE
Maxis Software	US	Tradewest	US
Microïds	GERMANY	Trimark Interactive	US
Midnight Software Inc	US	US Gold/Delphine	UK/FRANCE



■ *Alien vs Predator* is another Rebellion game, which uses complex texture-mapping techniques to produce these excellent tunnel effects.

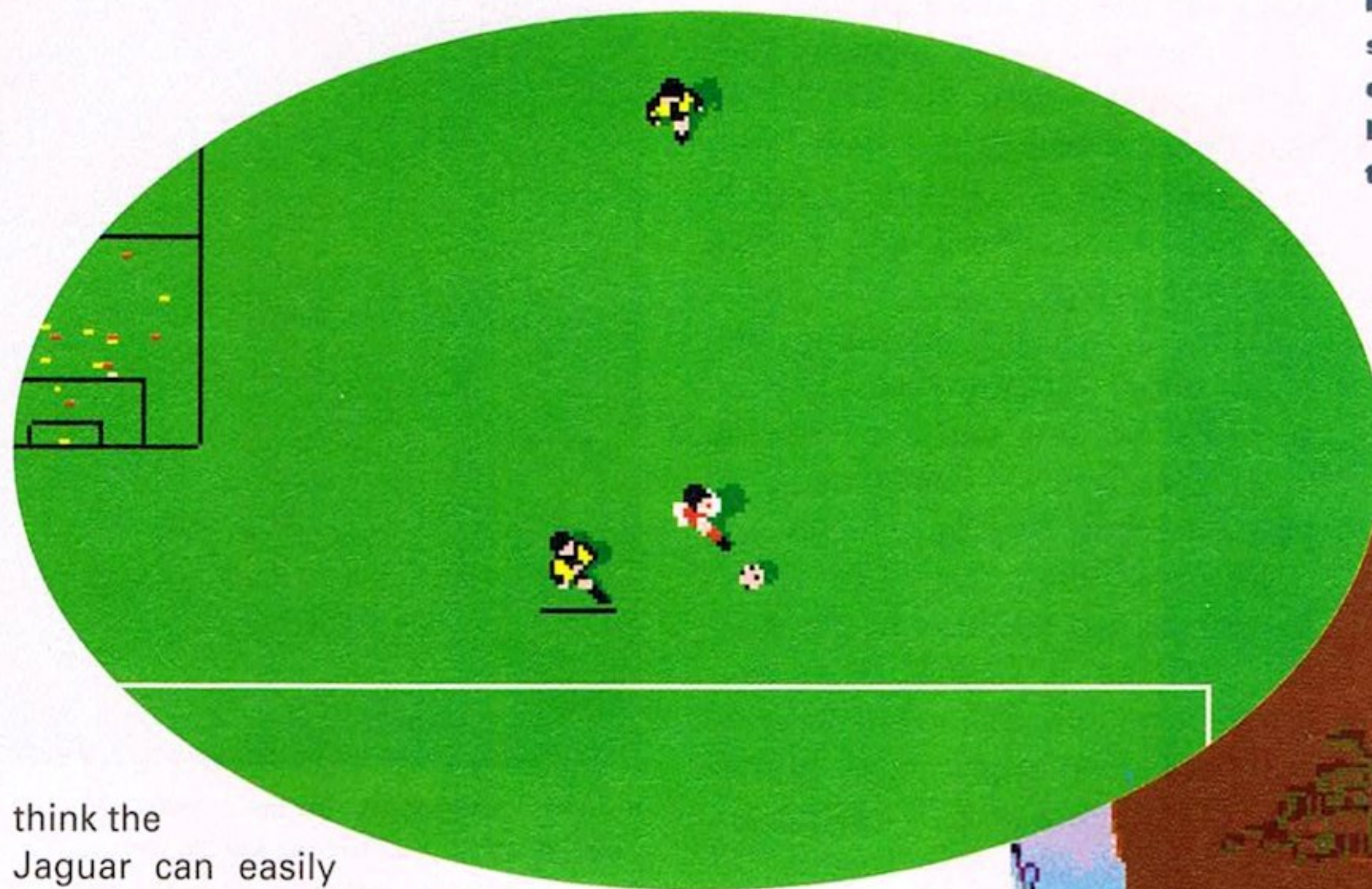
development system before we can do anything."

Krisalis Software are riding high in the charts with their game *Soccer Kid*. Tim James, marketing manager, says: "We've signed up, and we're waiting for Atari to send us a development system. When they do, we'll be developing *Soccer Kid* for the Jaguar. Tony, our MD, went along to the developer's conference, and was very impressed with what he saw."

French developers Virtual Xperience have two titles under

"We think the Jaguar can easily kill all other game systems like 3DO and Amiga CD32"

construction, going by the dubious working titles of *Zozziork* and *Indiana Jags*. M Schembri of Virtual Xperience told *ST FORMAT*: "The Jaguar version of *Zozziork* looks like the Falcon version, but it uses more than 256 colours, three parallax scrolls and more sprites. We



think the Jaguar can easily kill all other game systems like 3DO and Amiga CD32."

Also under development is *Brutal Football*, a violent American Football game from Millennium Interactive, who are also considering converting the next instalment of the *James Pond* series, called *Operation Starfish*. US Gold are creating their excellent animated adventure *Flashback*, which is fantastic news; as is the possibility of *Zool 2* from Gremlin.

Silmarils are aiming to release their futuristic survival game *Robinson's Requiem* around spring time 1994, while Virgin are reported to be developing a "big name film licence." Exact details on this game are sketchy but we suspect it will either be *Aladdin* or

Dragon: the Bruce Lee Story. Either way, that will be another string to the Jaguar's bow. For more news on these games, keep reading *ST FORMAT*.

Darryl Still, the marketing manager of Atari UK is extremely pleased at the number of developers they've managed to sign up, commenting: "The response from software publishers has been exceptional. All of them are committed to making their Jaguar versions of software mirror the hardware, which means they will



■ *Cybermorph* from Atari is looking superb. The Jaguar's ability to display true colour scrolling backgrounds is already being used to great effect.

■ This is the original ST version of *Kick Off 2*. The Jaguar version will have more colours (obviously) and it will play faster and smoother than ever!



■ *Aladdin* from Virgin could be coming to a Jaguar near you soon...

be vastly superior to their console cousins. Rather than have 400 titles available for Jaguar by this time next year, and 100 of those be good, we would sooner just have the 100 strong titles." A commendable attitude indeed – and certainly one which other manufacturers would do well to follow.

GET SECT FOR CHRISTMAS

French softies Lankhor are busy coding their next game *Black Sect* for the Falcon. The game is reported to be playable at the moment, but it is unlikely to be released until Christmas or early next year.

Black Sect is a gothic adventure set around the village of Hobdale in Yorkshire where your Uncle, a wizard, is killed by mem-

bers of a mysterious sect. After they've stolen his spell book, they begin to terrorize the villagers – and you're left to pick up the pieces of the spell book and get rid of the evil sect in one way or another.

As you can see from these exclusive pictures, *Black Sect* is looking pretty good – expect a review in a couple of issues' time. Contact UBI Soft, the game's UK

distributors, on ☎ 081 343 9055 for further information.



■ Barren landscapes are the setting for *Black Sect* on the Falcon. In the distance you can just about see dark, satanic mills...

SNIPPETS

Colour digitising alert!

Vidi ST 12 is now available from Rombo. This new version of their video digitising hardware enables grabs to be made in 512 colours on an ST – in *Spectrum 512* format – and in true colour on a Falcon. Costing £149, Vidi ST 12 includes a built-in RGB splitter and can grab images from composite video or Super VHS (SVHS) inputs, the original version of Vidi ST used a separate RGB splitter unit.

The software contains image processing and animation software turning your ST or Falcon into a powerful graphics workstation. You can make monochrome grabs in real-time while colour grabs take "a fraction of a second." In other words, colour grabs are made from still video images. For more information about Vidi ST 12 contact Rombo on ☎ 0506 466601 and check out our definitive review next issue.

Multiple MIDI

Q Tek UK are a new company dedicated to distributing professional audio equipment starting with Q-Logic's MIDI Metro visual metronome and the MBC1 MIDI bar counter. Q-Logic are concentrating on developing new hardware and the export market.

Q Tek are distributing several other MIDI packages: *Soundpool's Audio Master* is a two track direct to disk digital audio workstation for the Falcon enabling you to perform extensive mixing and mastering functions on-screen, Soundpool GigaDrive hard drives enable complete CDs to be stored and edited on disk and the MM1 MIDI Multi Port for the ST provides eight MIDI ports and 128 virtual MIDI channels.

Full details of these packages can be obtained from Q Tek on ☎ 0382 200808.

Solderless TOS

Upgrade your STFM to TOS 2 with the new solderless TOS switcher from Analogic Computers. All previous TOS switchers for the STFM have had to be soldered in place – not really a DIY job.

Thanks to the innovative design of the Analogic board the new STFM TOS switcher is a simple plug-in device and can be installed in under an hour, this enables you to switch from one version of TOS to the other at the flip of a switch. The board costs around £60 with TOS 2.06 ROMs. Analogic are on ☎ 081 546 9575.

The Captain's legless...

Robinson's Requiem, from Silmarils, is apparently a game in which you can "eat your own legs." Sounds odd? It's due for release in February 1994 on ST, so we'll bring you more news soon...

AN ATARI SHOW! HURRAH!

A good sized crowd turned up at Alexandra Palace to attend the London Atari Show and see what new goodies were available for the ST and Falcon.

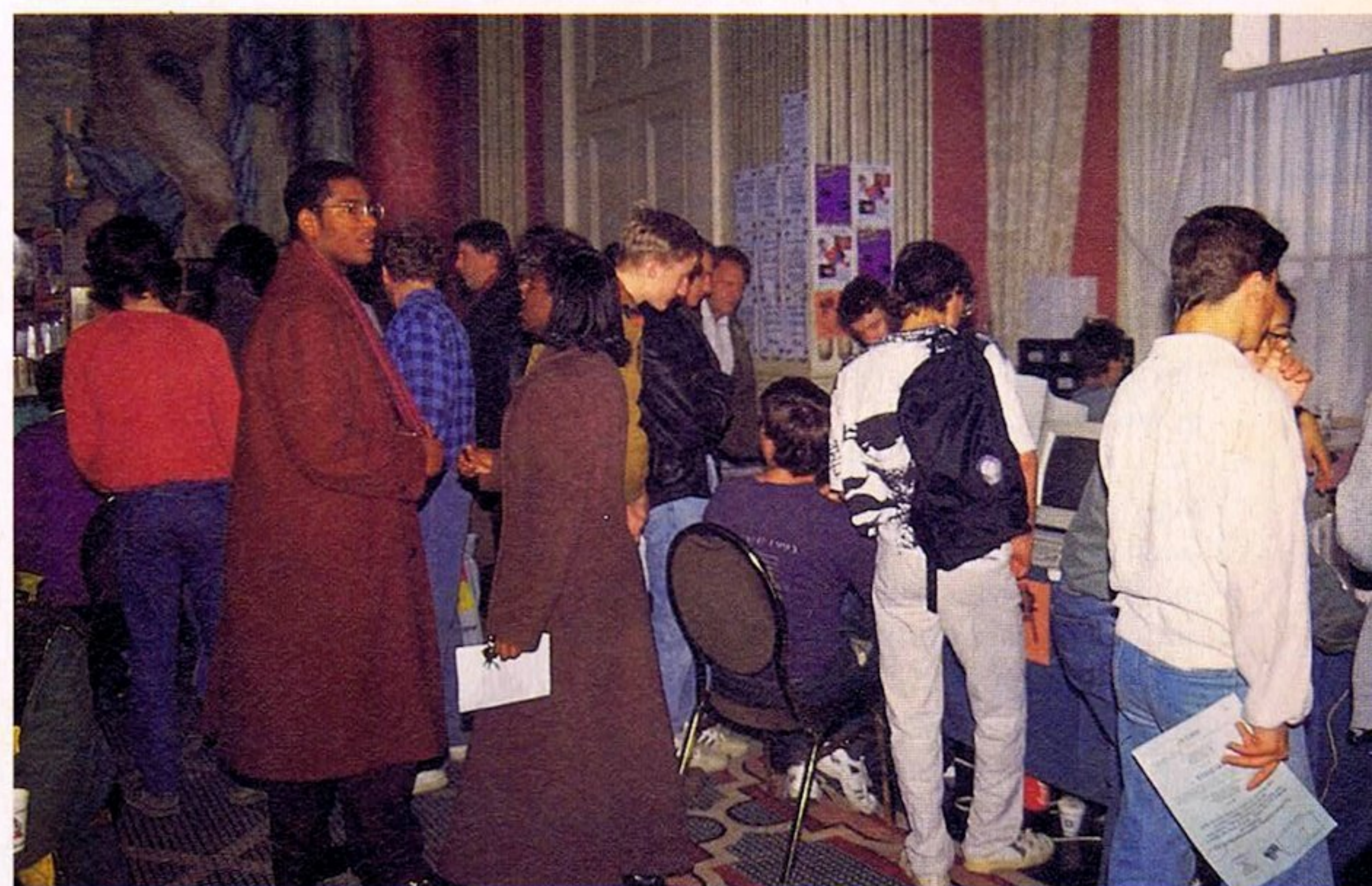
This show was certainly better organised than the last Le'ST Get Serious event, and took place in a hall with an annexe available for exhibitors. About 800 people attended overall.

Most people attending the show either already had a Falcon or were on the verge of buying one, the general consensus of opinion being that the Falcon is a great machine that has been denied its just position in the market because it hadn't been promoted enough. Many are worried that the Falcon might go the way of the TT and Mega STE in the UK and quietly disappear from the shops, and most were of the opinion that the Falcon030 "If you can understand this" advert is unnecessary.

"Most people are of the opinion that the 'if you can understand this' ad is unnecessarily obscure"

sarily obscure.

Everyone owning a Falcon is adamant that the machine could secure Atari's future in both the home and specialist computer mar-



■ Just a few of the people who turned up at the latest Le'ST Get Serious Show. Book in now for the next ones on 5 and 12 December.

kets, and that the software and hardware released so far just scratches the surface of the machine's capabilities.

Several new or improved packages were on display. Hisoft/AVR were demonstrating and selling the latest version of *Videomaster* for the Falcon (see review on page 38) alongside new Falcon compatible versions of their language software. Compo Software were selling copies of *Studio Photo* like crazy, and the CGS, System Solutions and 16/32 Systems stands were so crowded that it was difficult to see what was going on at times. Of particular interest on

the 16/32 stand were the continuous demonstrations of the latest Lexicor graphics software by Yat Sui of Lexicor US who flew in specially for the show.

All the exhibitors were pleased with the turnout for the show, Hisoft's David Link was surprised by how much he sold with many items selling out. Neil O'Nions of Compo Software was also pleased with sales and the enthusiasm of the visitors.

The next Atari Show takes place at the National Motorcycle Museum in Birmingham on Sunday 5 December between 10am and 6pm. Advance tickets are available from CGS Computerbild ☎ 081 679 7307 price £5, tickets on the door cost £5 before 2.30pm and £3 afterwards.

GOVERNMENT TO TAX WORDS

Rumours are gaining pace that the government is to impose a Value Added Tax rating on all magazines at the forthcoming budget – and yes, that includes ST FORMAT.

Now, we obviously don't want to see the price of the mag going up any more – and it seems unlikely that you're going to applaud the decision – so we're going to have to do something about it. Bear in mind first that the

latest research suggests that the revenue this move will generate is about £50 million – which isn't really that much in governmental terms. It is also likely to cause the closure of lots of magazines – although *STF* won't be going among them – precipitate job losses and lead to increased cover prices on most if not all magazines.

If there's still time, why not do your bit to prevent all this? First you can write to the Right Hon Ken-

neth Clarke MP at the House of Commons, Westminster, London and complain. If, however, the moment has passed we can do only two things. The first is to apologise for the forthcoming price increase – unfortunately there's nothing we can do about it. And second, why not subscribe? That way, not only do you get *STF* delivered to your door, you also avoid paying VAT. Turn to page 90 for more details.

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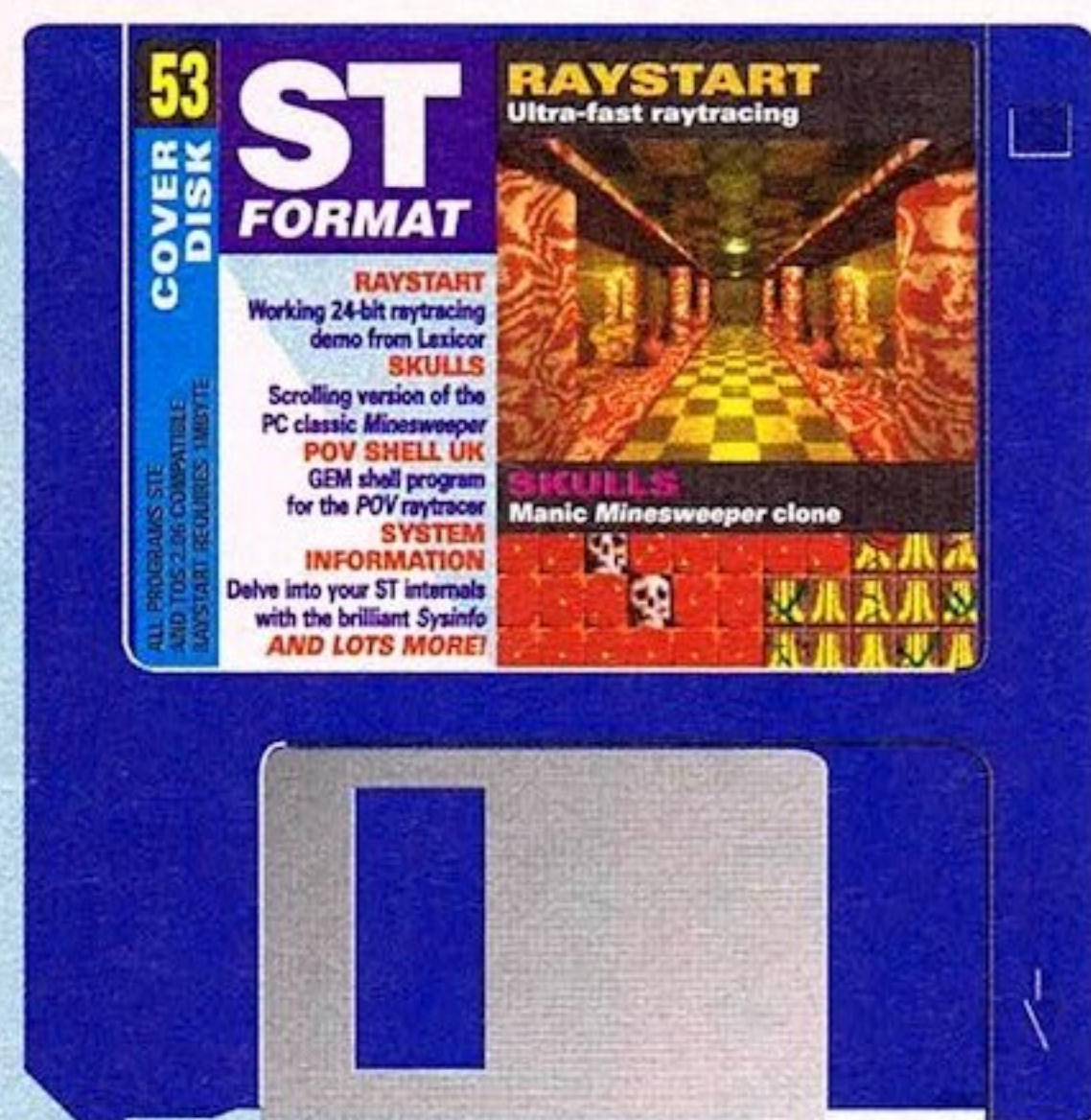
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COVER DISK 53

Blimey! There's over 1,864K of software on this month's jam-packed Cover Disk! Clive Parker shows you what's what and where to find it all. Read on and enjoy...

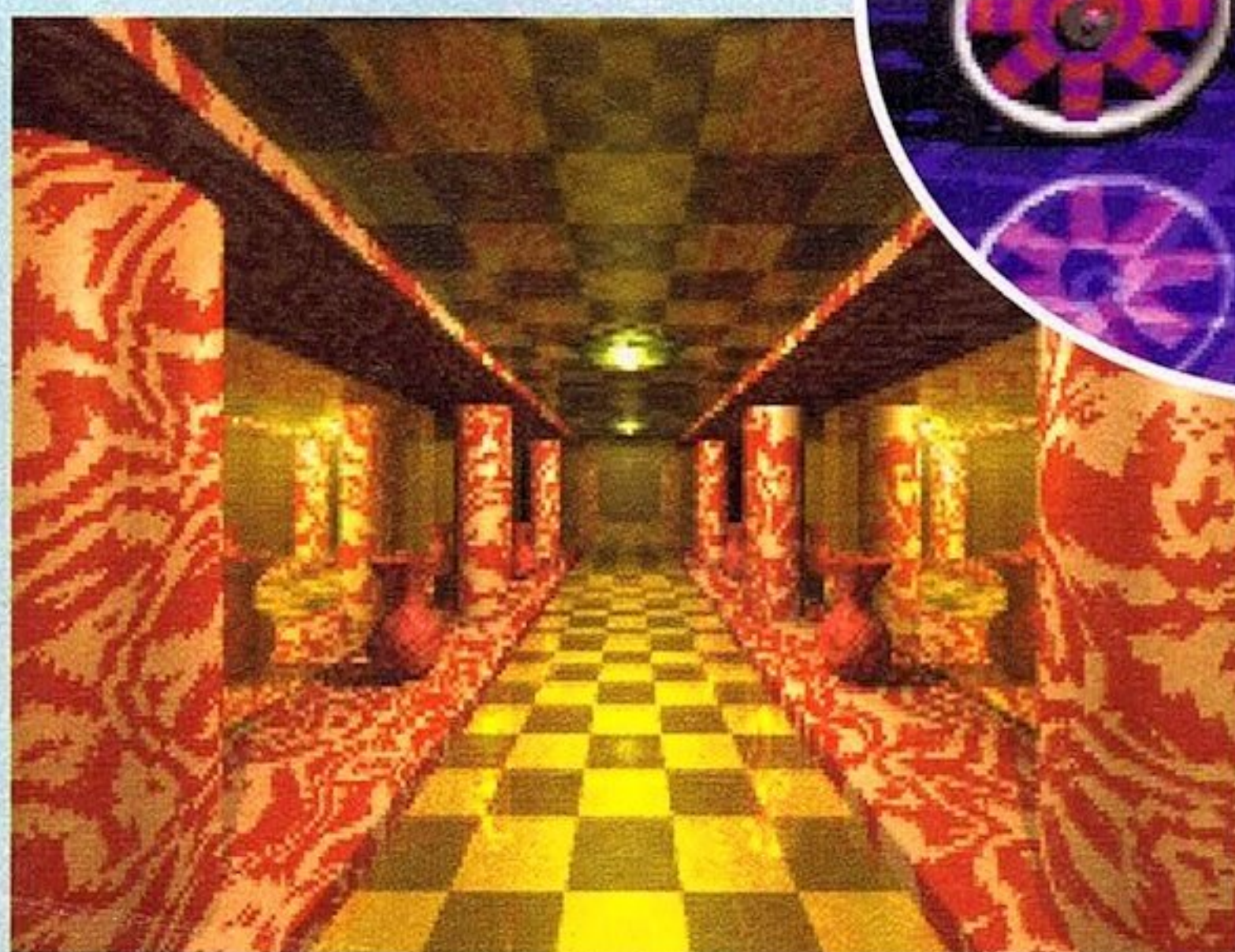
Raystart

BY: LEXICOR

RESOLUTION: ALL ST AND TT RESOLUTIONS, FALCON030 256 AND TRUE COLOUR MODES
MACHINES: ALL STS, MEGA STE, TT AND FALCON030
MINIMUM MEMORY: 1MBYTE
HARD DRIVE INSTALLABLE
FALCON030 COMPATIBLE
FOLDER: RAYSTART
FILES: RAY_1.TOS, RAY_2.TOS, RAY_3.TOS, RAY_4.TOS
UNCOMPRESSED SIZE: 1.43MBYTES
GET STARTED WITH: SEE BELOW

We always try to get the biggest and best programs for our Cover Disks, and our *Raystart* demo is the biggest one yet! It's a 24-bit raytracing program designed to work on any ST that uses the standard Atari GEM-VDI protocols – that is, on all STs, TTs and Falcons with at least 1MByte of RAM.

Raystart is so big we've compressed it into four self-extracting files so we could fit everything on the Cover Disk. Each file contains a different part of *Raystart* and must be decompressed onto a separate blank disk, so you need four blank formatted disks at the ready.



■ Another of the demo *Raystart* files on the Cover Disk, this raytraced hall shows the brilliant results you can get with simple imagery.



The hitch-hiker's guide to the Cover Disk

Raystart

The most comprehensive and powerful raytracing program you can get for your ST, TT or Falcon, capable of creating 24-bit colour images even on a mono ST.
Uncompressed size: 1.43MByte
 page 12

POV UK

An easy-to-use GEM shell for the *Persistence of Vision* raytracer we gave you on Cover Disk 49, now there's no need to use the command line to create your pictures.
Size: 29K
 page 13

Sebra

The best mono emulator around, essential if you want to use

Arabesque or any other high res programs on a colour system.

Size: 21K
 page 15

Skulls

An excellent version of the popular PC *Minesweeper* game with a huge scrolling play area with up to 1,600 squares to investigate.
Uncompressed size: 292K
 page 14

System Information

Investigate everything that's happening inside your ST's or Falcon's operating system with *SysInfo*, the system monitor that leaves no byte unchecked.
Size: 52K
 page 13

Laser Chess

Unusual variant of chess on a 9x9 board; instead of taking your opponent's pieces in the traditional manner you can just zap them in this two-player game.
Uncompressed size: 60K
 page 14

Cover Disk Back Up

Keep your original Cover Disks safe and sound with *Back-up*, so there's no sobbing pathetically in your bedroom after deleting your favourite Cover Disk game.
Size: 13K
 page 15

■ See page 19 for Cover Disk 2 with *Arabesque* worth £130.

ing, after a few minutes you have *Raystart* ready to run. The *Raystart* demo can't save your raytraced pictures to disk, but you can view them from within the program when they have been created. All the TOS files can be deleted from your work disks once they are decompressed.

Getting under way

When you run RAYSTART.PRGM you are in the main menu with the toolbox displayed on the left and the output window on the

■ *Raystart* can also be used to create more complex objects like this bicycle, each part of the bike is a separate object.

right, the toolbox contains a different set of tools depending on which mode you are in and the output window displays the results of any actions performed in the toolbox window. The main menu enables most of the general functions of *Raystart* to be accessed, including loading of all *Raystart* objects, camera, light and colour parameters. You can also use the

main menu for creating objects to be raytraced using the object menu, along with assigning colours and materials for the object. The Camera menu is where the raytracing actually takes place and defines the way the finished picture looks; you can adjust the relative positions of almost everything in the scene by moving the camera, the lights and the objects to be raytraced. You can define all rendering options by selecting Render Mode from the options menu. Lights are definable from the same menu and the file menu enables TIFF, IMG, XIMG and PIC pictures to be loaded (but not saved) and raytracing data to be loaded.

Special offer

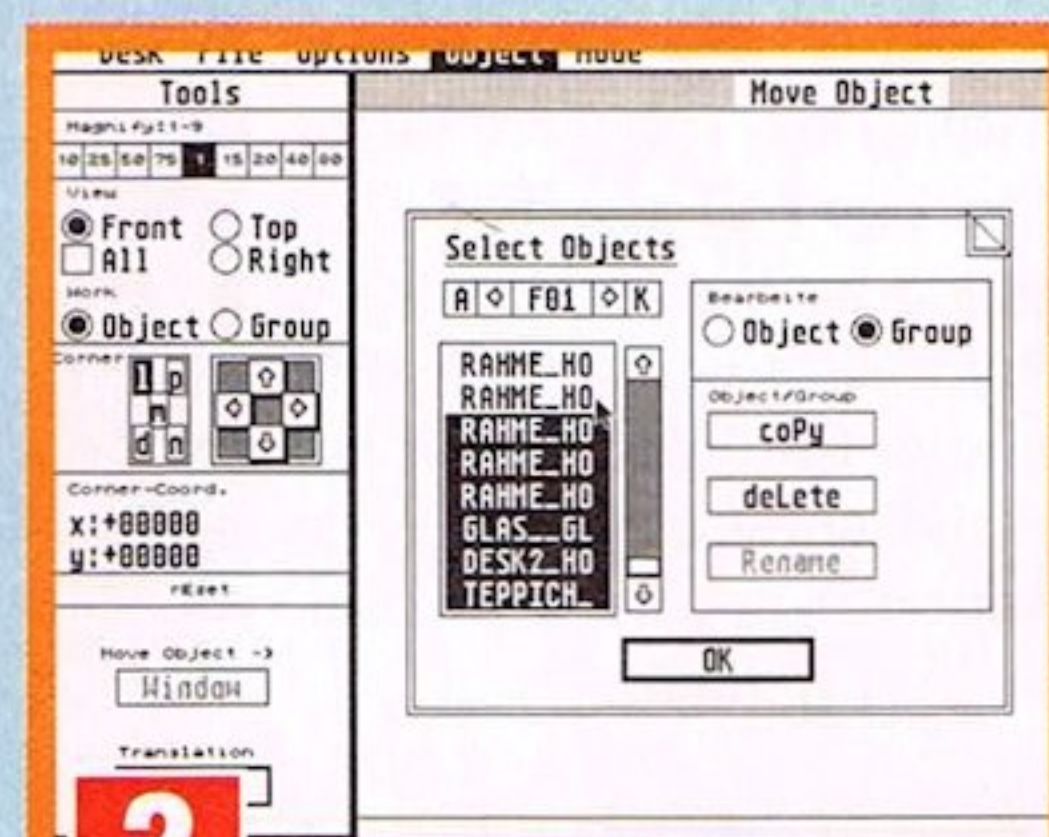
ST FORMAT and 16/32 bring you a special chance to get *Raystart* for £65 – a saving of £24. To take advantage of this, send your Cover Disk to: 16/32 Systems, 173 High Street, Stroud, Kent, ME2 4TW by 31 December 1993 and they'll send you the full program.

STF'S INSTANT GUIDE TO RAYSTART

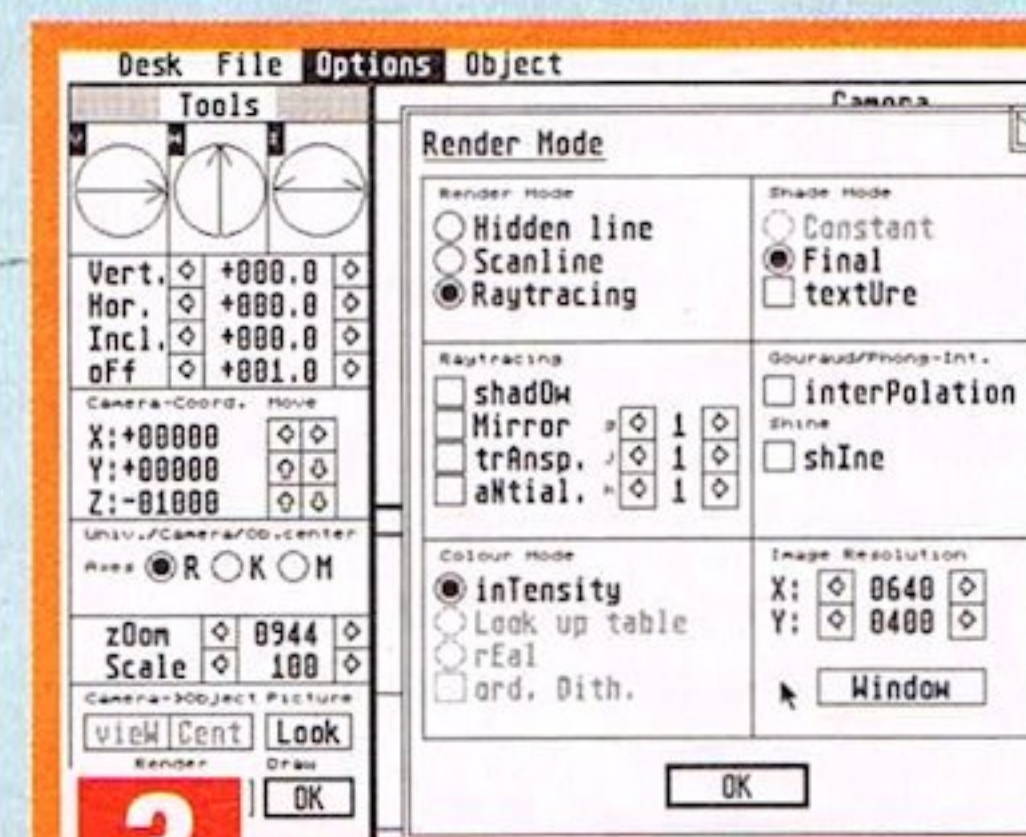
Load up Raystart and follow these simple steps to create your first raytraced image



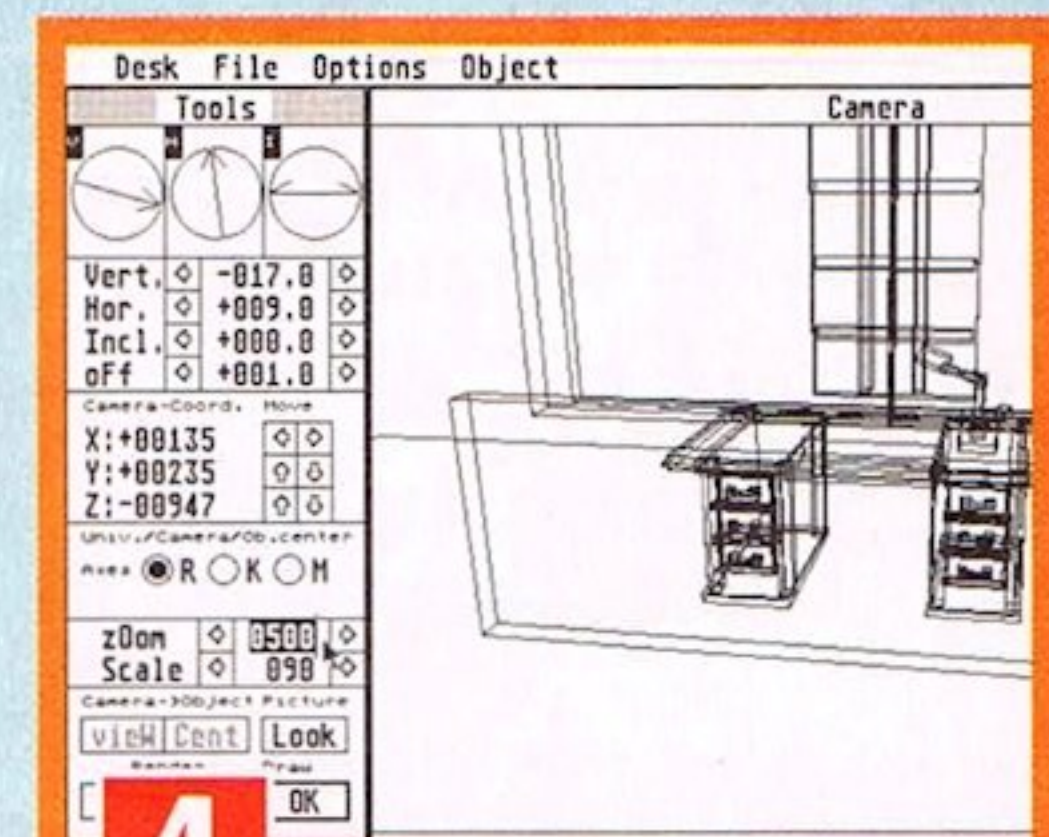
1 Go to the main menu and click on the Select option in the File menu, when the Fileselect dialog box appears select "objects-all" and click on the load box. When the file selector appears select DESK.OBT and click on OK. Repeat the procedure to load the camera, lights and colour options then exit the dialog box. You can't load colours in ST high resolution mode.



2 There's nothing on-screen yet, so go to the Object menu and click on Select, and the Select Object dialog box appears. You must select each object that makes up the complete design so you can view it on-screen. To do this, keep the <Shift> key pressed and select the objects in the selection window one by one. Click on the Group button so any actions taken affect the entire group.



3 After you have selected all the objects the scene is displayed in the work window, you can view it from different angles by choosing Front, Top, Right and All in the Tools window. Now go to the Options menu and select Camera mode. The scene is drawn using the camera, light and object information loaded earlier, now select Render Mode from the Object menu to enter your raytracing parameters.



4 The Camera Tools enable you to alter the viewpoint of your scene in several ways. You can alter the position of the camera in three dimensions, the direction the camera is pointing can be rotated on three axes and the zoom and scale values can be adjusted. To render your picture click in either the PIC or TIF boxes at the bottom of the screen, TIF mode is disabled in ST high resolution.

Follow our walkthrough to discover the basic steps for getting started with Raystart; there are plenty of functions that you can experiment with and you can soon create your own images. As an extra bonus, Raystart enables you to load CAD

3D2 objects into it, so if you just happen to have a large collection of CAD 3D drawings you can now raytrace them.

Raystart really is a very fast and powerful raytracer, so what are you waiting for – get stuck in.



■ After all that you end up with this, the Raystart desk rendered in all its glory.

POV Shell UK

BY: DIRK KLEMMT, OLAF MEISIEK AND AKIRA
RESOLUTION: ST MEDIUM OR HIGH
MACHINES: ALL STS AND FALCON030
MINIMUM MEMORY: 1MBYTE
HARD DRIVE INSTALLABLE
FALCON030 COMPATIBLE
FOLDER: POV_UK
FILES: POV_SHELL.PRG,
POV_SHELL.RSC, POV_SHELL.INF
SIZE: 29K
GET STARTED WITH: SEE BELOW

Persistence of Vision is the fantastic raytracing program we gave you on Cover Disk 49, the genius of the program marred only by its PC-

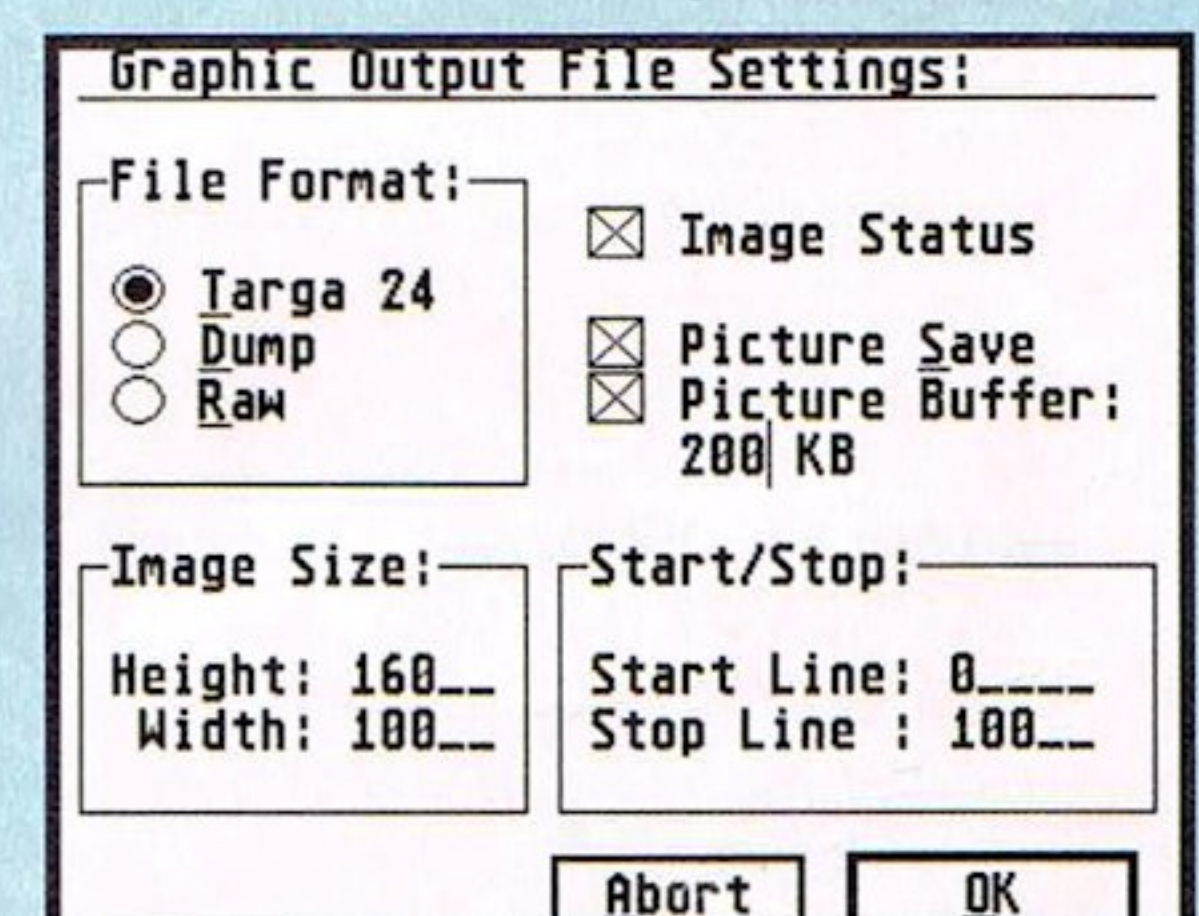
style command line interface. Now there's no need for you to type in complex commands because we've got an easy-to-use GEM shell for POV on this month's Cover Disk. Using the program means that you can enter all of the POV commands by pointing and clicking on boxes, buttons and menus within POV Shell – much more pleasant.

To get started, copy the contents of the POV_UK folder on your ST FORMAT Cover Disk to your POV working disk then run POV_SHELL.PRG. Once the program is loaded you have to tell it where to look for the POV command program and all the files that go with it; the scene files and the includes files. To do this select the Path option from the Settings menu and then click on the Path for POVray box, the file selector appears and

you can use it to define the disk and directory where the file POV68000.TTP lives.

Once you have defined the program path you can define the paths for the scene files and the includes files. Finally, define the path to save your raytraced picture to and click on OK. Save the settings using the option in the Settings menu.

Now use the POVray Output option to select the parameters of your picture. You can set the output file type to Raw, Screen or Targa images and define the size of your picture files. This menu also enables you to set up picture buffer and saving options. The last option in the Settings menu enables the quality of the raytraced pictures to be defined, setting up light, shadows, textures and anti-aliasing.



■ Selecting POVray Output from the Settings menu enables you to set up your picture type and size; don't forget to save any changes you make to your setup.

Now that we've made POV so easy to use for you, you've got no excuse not to create some brilliant raytraced pictures. Why not send them in to Pixel Painting? You might win some dosh.

SysInfo

BY: H W A M DE BEER
RESOLUTION: MEDIUM AND HIGH
MACHINES: ALL STs, TT, FALCON
MINIMUM MEMORY: 0.5MBYTE
HARD DRIVE INSTALLABLE
FALCON COMPATIBLE, NOT MULTITOS
FOLDER: SYSINFO
FILES: SYSINFO.PRG
SIZE: 52K

Using SysInfo you can find out everything that's going on in the mind of your ST or Falcon; you can examine the RAM, the ROM, the keyboard, the vectors and VBL and the cookie jar. It's a programmer's dream come true.

To use SysInfo is simple enough, all you have to do is double-click on the SYSINFO.PRG to run the program and wait for the first page of information to appear on-screen. This page is crammed

with information about your system and setup, ranging from the particular machine you are using to the TOS, AES and GEM versions of your machine. It also tells you the time, date and resolution you are running in – and these are just a few examples of the info on the first page alone.

There are many other pages in the program which reveal more info about your operating system, 16 pages in all including a full scale

memory dump facility and system crash information. You can access each page in three ways; by pressing the right mouse button to bring up a menu, selecting a keyboard shortcut or by pressing the relevant function key or shifted function key. Pressing <Help> lists all of the commands available.

There's no other system utility available that can match the quantity of information you can get from SysInfo. Great stuff.



Skulls

BY: SODERBERG SOFTWARE

RESOLUTION:

LOW RESOLUTION ONLY

MACHINES: ALL STS, MEGASTE
(NOT 16MHZ)

MINIMUM MEMORY: 0.5MBYTE

HARD DRIVE INSTALLABLE

FOLDER: SKULLS

FILES: SKULL.TOS

UNCOMPRESSED SIZE: 292K

GET STARTED WITH: SEE BELOW

Skulls is an addictive and frustrating clone of the popular PC *Minesweepers* game, and is played on a huge scrolling grid. You have to check every square on the grid to see if it's safe to walk on, and this is not an easy task. One mistake and you're dead. The grid can be 20x20, 30x30 or 40x40 squares in size and the game takes a lot of concentration, you only have ten minutes to clear the grid.

First of all you have to decompact the *Skulls* program, copy the SKULLS.TOS file from your Cover Disk onto a blank disk

and then run the program. The *Skulls* game decompacts itself onto the disk, just follow the on-screen prompts until everything is complete. You can now delete SKULLS.TOS from your blank disk – not the Cover Disk – and can run the *Skulls* program. After a few seconds a menu screen appears with several options including instructions, grid size, high score table and instructions for paying your Shareware fee. Yes, it's Shareware. If you like *Skulls* then please dig into your pockets.

Playing Skulls

The mighty god Odin has summoned all his divine friends to a grand gathering in the great hall of Valhalla. The only problem is that Hell has sent a horde of ogres and demons who are hiding under the floor of the great hall.

If any of the guests tread on one of the intruders a lethal cloud of vaporised brain tissue spreads over the hall, destroying the gods and bringing chaos to the earth. Your task is to check every single

flagstone in the hall to discover the safe areas to walk on; to aid you in your task you have a magical sphere you can use to examine the flagstones. Sitting in a safe position at the head of the hall you guide your sphere around the hall, floating three feet above the floor. However, if the sphere releases the vapour you die a painful, lingering death.

If you think a flagstone is safe, click the left mouse button and the sphere lands on the stone.

It informs you how many of the adjacent eight flagstones are safe by placing a die on the flagstone, if all eight are safe it places a blank die on the square. However, if any of the adjacent stones are dangerous it places a die with the number of dangerous stones displayed on it. A two means two dangerous squares, three means three and so on. If you think a stone is dangerous then a right mouse button click



■ The skulls mark the flagstones with demons lurking beneath them, if you land on a demon infested square then that's the game over. No second chances here, matey!

places a warning marker on the square, you can remove markers with another right mouse button click. You can only make mistakes revealing your first nine squares, after that, if you land on a demon infested square, you die.

Laser Chess

BY: MIKE M DUPONG

RESOLUTION:

LOW RESOLUTION ONLY

MACHINES: ALL STS

MINIMUM MEMORY: 0.5MBYTE

HARD DRIVE INSTALLABLE

FILES: LASER.TOS

UNCOMPRESSED SIZE: 40K

READ: LASER.DOC

GET STARTED WITH:

LASER.DOC, SEE BELOW

Laser Chess is chess with a difference, instead of just sedately mov-

ing around the chess board "taking" your opponent's pieces by landing on their square, you can also blast them to bits using your handy laser.

Laser? Yes, that's right, there are none of those common chess pieces like Bishops, Pawns and Knights in this game. This version of the game is more hi-tech with Triangular Mirrors, Diagonal Mirrors, Hypercubes, Lasers, Blocks and Beam Splitters.

Most of the pieces have a reflective mirrored surface on one side; if you hit the mirrored side with your laser the piece is

unharmd and the laser beam is reflected either at an angle or straight back towards you. If your Laser or any other piece is hit by your own beam it's destroyed, so take care where you are aiming. Hit an unmirrored side of any piece and it's blasted.

Like all versions of chess, *Laser Chess* is a two-player game – there's no option to play against your ST. Before you can play this unusual and exciting version of chess you have to decompact the LASER.TOS file, we've had to compress it so that we could fit the massive *Raystart* demo on the

disk. Copy LASER.TOS from your Cover Disk to a blank formatted disk, when you have copied it put your Cover Disk away. Now double-click on LASER.TOS to start decompressing the program.

After a minute or two of waiting around the program decompacts itself and you are asked to press a key.

Once LASER.PRГ and LASER.DOC have unpacked you can safely delete the LASER.TOS from your copy disk. Read the LASER.DOC file for full details of how to use each piece on the board and get blasting!

SECRETS OF THE MOVES

Make sure you shoot enemy pieces on the unmirrored side otherwise you may be destroyed by a ricochet from your own laser. Each piece has its own characteristics and features

TRIANGULAR MIRROR: can only be destroyed by a laser on its non reflective sides, can be rotated 90 degrees by clicking on it with the right mouse button. Each rotation uses up one turn.

BLOCK: can take enemy pieces by landing on them, has one reflective side that returns a beam to its source. Can be rotated.

DIAGONAL MIRROR: cannot be destroyed by lasers, can be taken by Kings or Blocks and can be rotated.

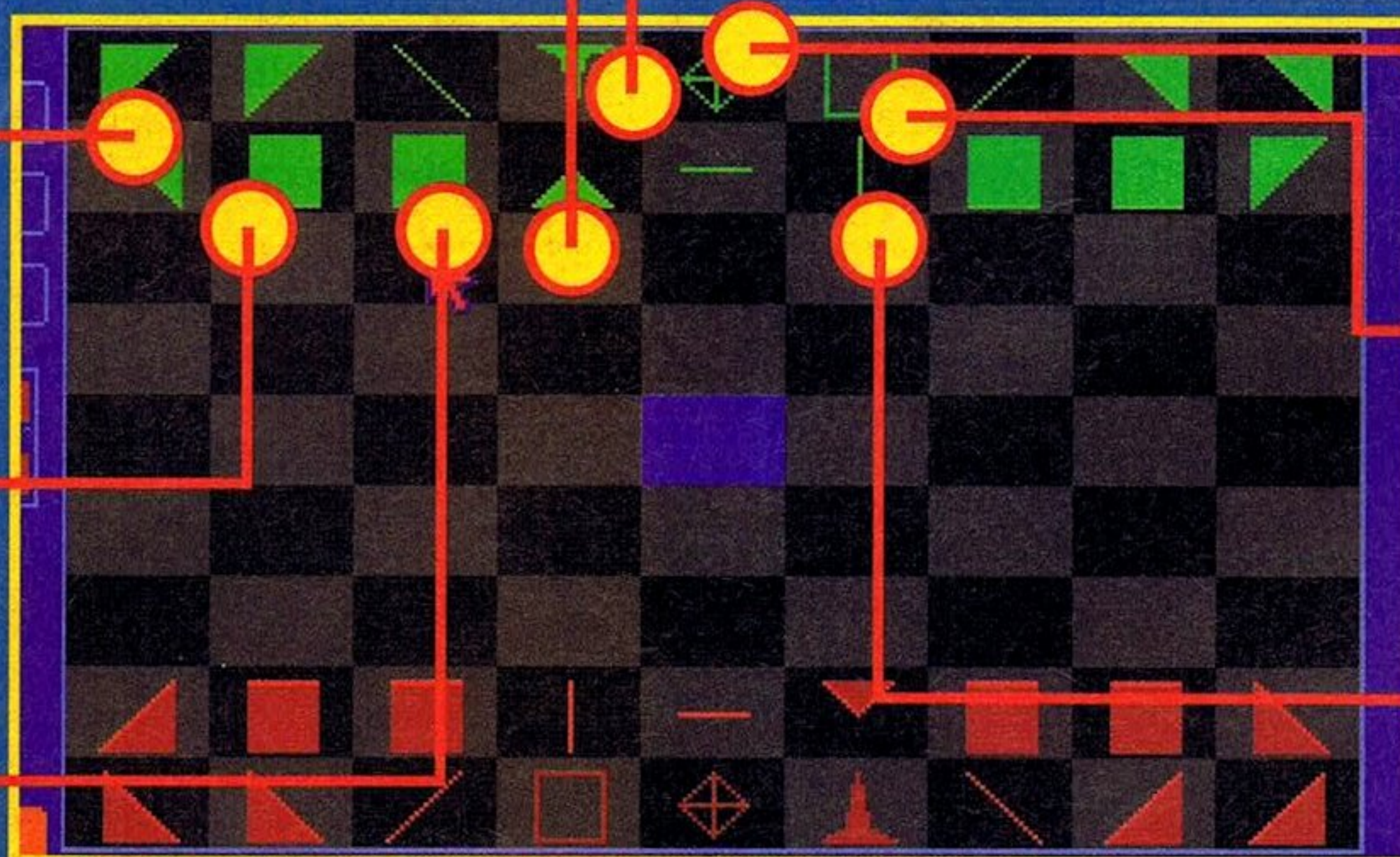
BEAM SPLITTER: when a beam hits its vertex (the pointy bit) it is reflected and split into two beams at right angles to the original beam's path. Can be rotated and is vulnerable to laser fire on its non-reflective side.

THE LASER: can be rotated to fire at enemy pieces, can be taken or destroyed by the enemy laser.

KING: captures other pieces by landing on their squares. Can be destroyed by laser fire.

HYPERCUBE: when the Hypercube lands on another piece that piece is transported to a random square. The Hypercube can be taken but cannot be destroyed by laser fire.

STRAIGHT MIRROR: may only be taken by a Block or a King, can be rotated.



Cover Disk Back-Up

BUY: BRIAN TILLEY
RESOLUTIONS: ALL
RESOLUTIONS
MACHINE: ALL STS
MINIMUM MEMORY: 512K
FOLDER: BACK_UP
FILES: BACK_UP.TOS
SIZE: 13K
GET STARTED WITH: SEE BELOW

Protecting your original software is vital, it's dead easy to accidentally delete a file when you're not paying full attention to what

you're doing. One slip and what have you got? A blank *ST FORMAT* Cover Disk!

Our backup program ensures that you can safely tuck your original Cover Disk away in a little box while using a backup copy to run all the software – better safe than sorry. In fact, make two backup copies of your Cover Disk just to be sure your data's safe.

Our Cover Disks are formatted to ten sectors so we can fit larger programs on them, this means that your ST cannot make a backup copy of the disks using the Desktop disk copy option. Of course, you must copy all the com-

pressed programs to blank disks to decompact them anyway but it's still best to do this using a backup copy of your Cover Disk. *Back-up* is designed to use all available memory on your ST to make the backup copy with the minimum number of disk swaps, usually only one disk swap is needed on a 512K ST and no swaps at all if you've got a 1MByte machine.

Write protect your Cover Disk by sliding the little black tab so you can see through the hole – now no information can be written to or deleted from the disk. Have a blank disk ready and load *BACK_UP.TOS* on your Cover Disk, then choose

option 1. This starts copying the data from the Cover Disk into memory, when memory is full you are prompted to put the blank disk into the drive and *Back-up* starts saving the data to it. All instructions are displayed on-screen, follow them exactly and you can't go wrong. Remember that your Cover Disk is the source disk and the blank is the destination, don't get them mixed up. If you have two drives then you can copy from drive A to drive B without any need for disk swapping.

Back-up copies any unprotected disks but doesn't copy game disks – bad luck, pirates!

Sebra

BY: PATRIK PERSSON
RESOLUTION: ST LOW OR
MEDIUM RESOLUTION
MACHINES: ALL STS
MINIMUM MEMORY: 0.5MBYTE
HARD DRIVE INSTALLABLE
FOLDER: SEBRA
FILES: SEBRA.PRG, SEBRA.DOC
SIZE: 29K
READ: SEBRA.DOC
GET STARTED WITH: SEBRA.DOC, SEE BELOW

Use high resolution software on your colour monitor with *Sebra*, the best mono emulator for the ST.

If you want to use *Arabesque* from the second Cover Disk then you need 1MByte of RAM and a high resolution mono monitor,

Arabesque doesn't run in medium or low resolution. Happily, the ghost of Cover Disk past remembered the *Sebra* mono emulator from a previous issue, we've put it on this month's Disk so that you don't feel left out if you only have a colour setup.

To use *Sebra* on your ST, format a blank disk and create a folder called Auto, now copy the *SEBRA.PRG* into the Auto folder you have created. Reset with the *Sebra* disk in the drive and the program loads automatically; you are given a choice of bypassing *Sebra* by pressing the <Esc> key or running the program by pressing any other key.

Once the program has loaded you are in high resolution mode on your colour ST and you can run almost all mono software with nothing more than a little blurring of some horizontal lines. You can configure *Sebra* by double-clicking on *SEBRA.PRG* from the Desktop, a menu is displayed enabling *Sebra*'s various functions to be adjusted. The emulation speed, mode and monitor frequency can be set along with the palette and mouse speed.

A full list of the program's features and detailed instructions are included in the *SEBRA.DOC* file lurking on the Cover Disk, now boot-up *Sebra* and get to grips with *Arabesque*.

■ *Sebra* has its own built-in control panel so you can set it up exactly how you want it, if you find the grey background too hard on the eyes then switch to green, brown or blue modes.

SeBra 1.32 - Default settings
 PATRIK PERSSON 1992 for ST FORMAT

Emulation speed:
 Low Normal High

Emulation mode:
 Shaded Fast Magnified

Vertical blank frequency:
 50 Hz 60 Hz No change

Palette:
 White Green Brown Blue

Enhanced mouse:
 Active Inactive

Save End

What's your problem?

1. This Disk won't load!

Before you do anything else, check your drive. If it's older than 1988, it's probably single-sided and cannot format any disk to more than 360K – this also means it can't read *ST FORMAT* Cover Disks. Single-sided drives are obsolete and it's well worth upgrading. Replacement drives are easy to fit and cost as little as £35.

So your drive's spanking new, or at least it's double-sided. *ST FORMAT* duplicates hundreds of thousands of Disks every month so, unfortunately, some are bound to be defective or damaged in some way. If the Disk just won't load, or you can't open a window at all, there's nothing in it, or the folder names are gobbledygook – the Disk is defective. It doesn't happen often, but please accept our sincere apologies. You're guaranteed a free replacement if you return the Disk to:

ST FORMAT December Disk Returns, PO Box 21, Daventry, NN1 5BU

Enclose a sturdy self-addressed envelope (unstamped – we'll pay for the postage) and a brief letter explaining the problem. If you're worried about trusting your Disk to the mails, the Royal Mail's Recorded Delivery service costs only 55p on top of normal postage.

Please don't send your defective Disk to any other address than the above one – we have no stocks of Disks at the Bath or Somerton offices.

2. I can't work out this Cover Disk program!

Your Disk seems OK; everything loads, but you've got a problem with one of the programs. Make sure you've read all the relevant Cover Disk pages and any document files on the Disk. Try consulting your ST owner's manual – that may have the information you need. Still got a problem? Then give us a ring on Wednesday afternoon. Telephone the *ST FORMAT* Cover Disk Hotline ☎ 0225 442244 on Wednesday between 2 – 6 pm only.

We don't write the Cover Disk programs ourselves and don't know as much about them as the programmers, but we'll do our best to sort your problem out. The above phone line is for Cover Disk problems only.

3. I have a problem with this other program I bought!

Start with the distributor of the program. Most software houses run some kind of helpline service – check the information that came with your software for the number.

4. I've still got an ST problem!

If you've still got a problem, you suspect your machine may be faulty, or you need an answer to a more general query – then you have two options. (a) Ring the official Atari Helpline ☎ 031 332 93233 on any day from Monday to Saturday 6 pm – 11 pm or on Sundays from 8pm to 11pm. (b) Write to ST Answers, *ST FORMAT*, 30 Monmouth Street, Bath, Avon BA1 2BW – and let *ST FORMAT*'s team of experts tackle your problem in the pages of *STF*. Please could you indicate on the envelope what type of problem it is.

Share your creations with STF

We pay for your software – games, utilities, demos – anything good, original and short. If you've written anything worthy of appearing on *STF's* Cover Disk, send it with this form and full documentation to: Clive Parker, *ST FORMAT* Cover Disk Editor, 30 Monmouth Street, Bath, Avon BA1 2BW. Please be patient: we get absolutely loads of submissions, and we try to give them all a fair testing!

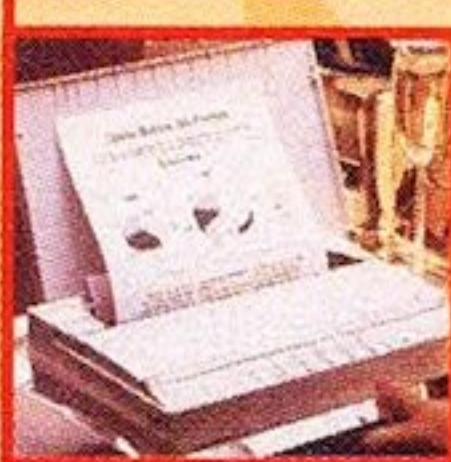
Name _____
 Address _____
 Daytime phone _____ Program title _____
 Total size in K _____

On a separate sheet, explain concisely what the program does and why you happen to think it's so brilliant.

Remember to: ■ Include on-disk and paper documentation ■ Write your name and address on the disk ■ Use a virus-free disk ■ Keep a copy of your program, because contributions are non-returnable ■ Enclose an attractive bribe. Not that it makes a difference.

Please sign the following declaration: This program is submitted for publication in *ST FORMAT*. It is wholly my own work and I hereby agree to indemnify Future Publishing against any legal action should copyright problems arise.

Signed _____



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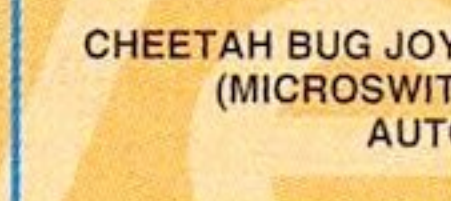
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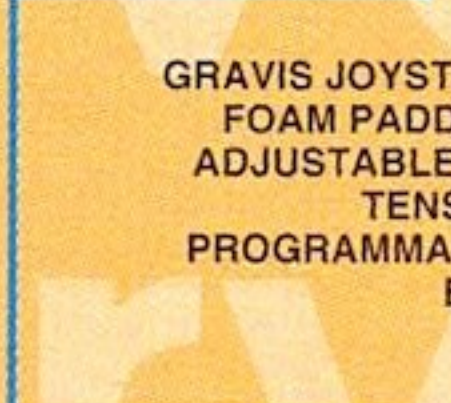
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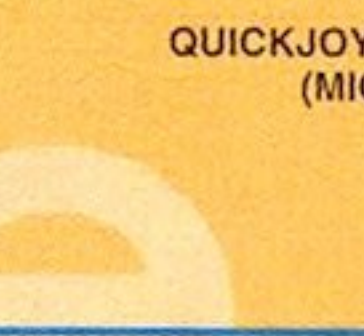
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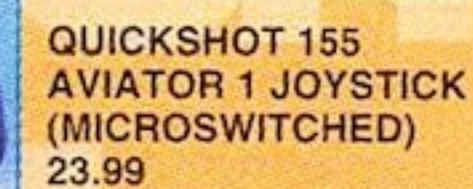
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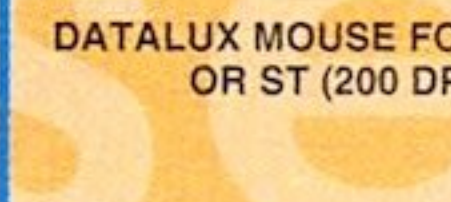
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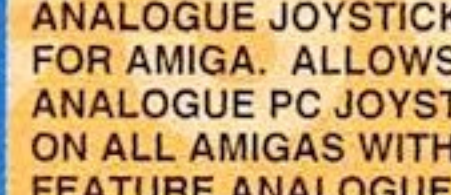
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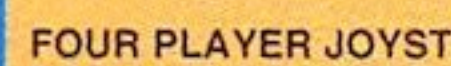
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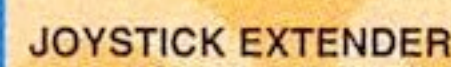
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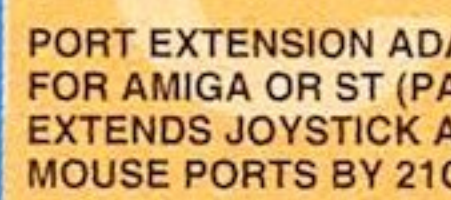
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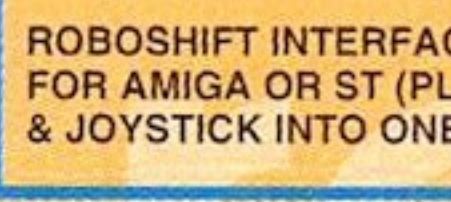
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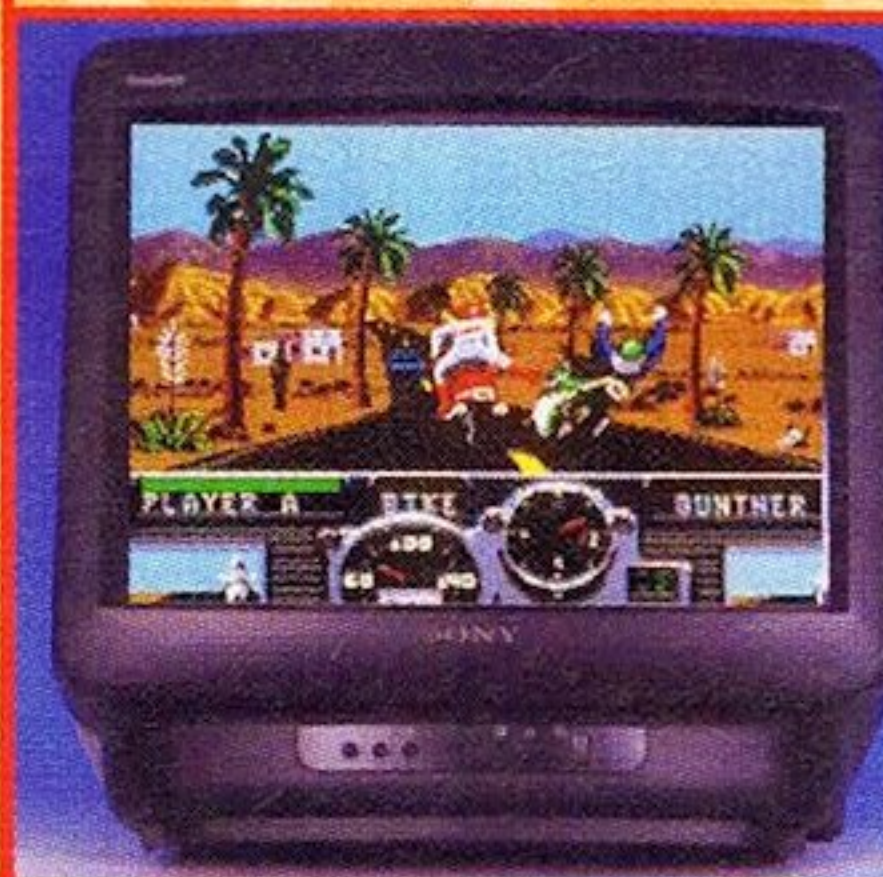


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COVER DISK 53

MANUALS FOR SALE!
Arabesque is a very complex program so to get the most out of it we recommend you get hold of the manual. See page 57 for more details

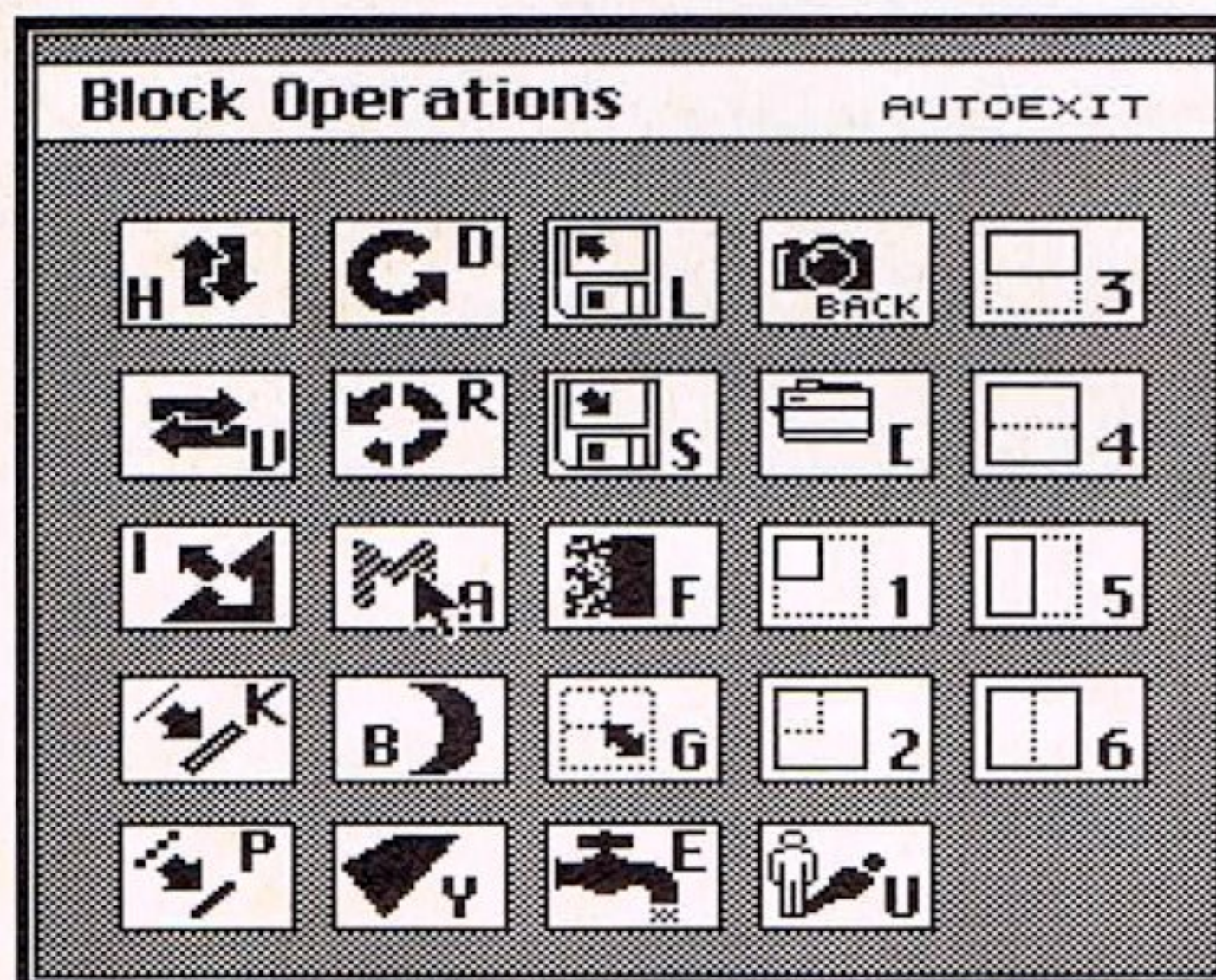
Arabesque Professional is a powerful bitmap and vector graphics package designed to be the complete solution to all your illustration requirements. Clive Parker gets you started with this excellent software

Arabesque is a very powerful graphics program, because of this it needs at least 1MByte of memory and a high resolution monitor to run. If you have 1MByte of RAM but only

have a colour setup then use the *Sebra* mono emulator supplied on the main Cover Disk, instructions for using *Sebra* are on page 15. *Arabesque* works on the Falcon as long as you select ST high resolution from the Compatibility Mode option of the Select Video menu.

Arabesque is simple to install; if you have a floppy disk based system then just make a backup copy of your Cover Disk using BACK_UP.TOS, you can then use the backup

■ This screen can be squeezed, twisted and manipulated to your heart's content!



Bitmap graphics

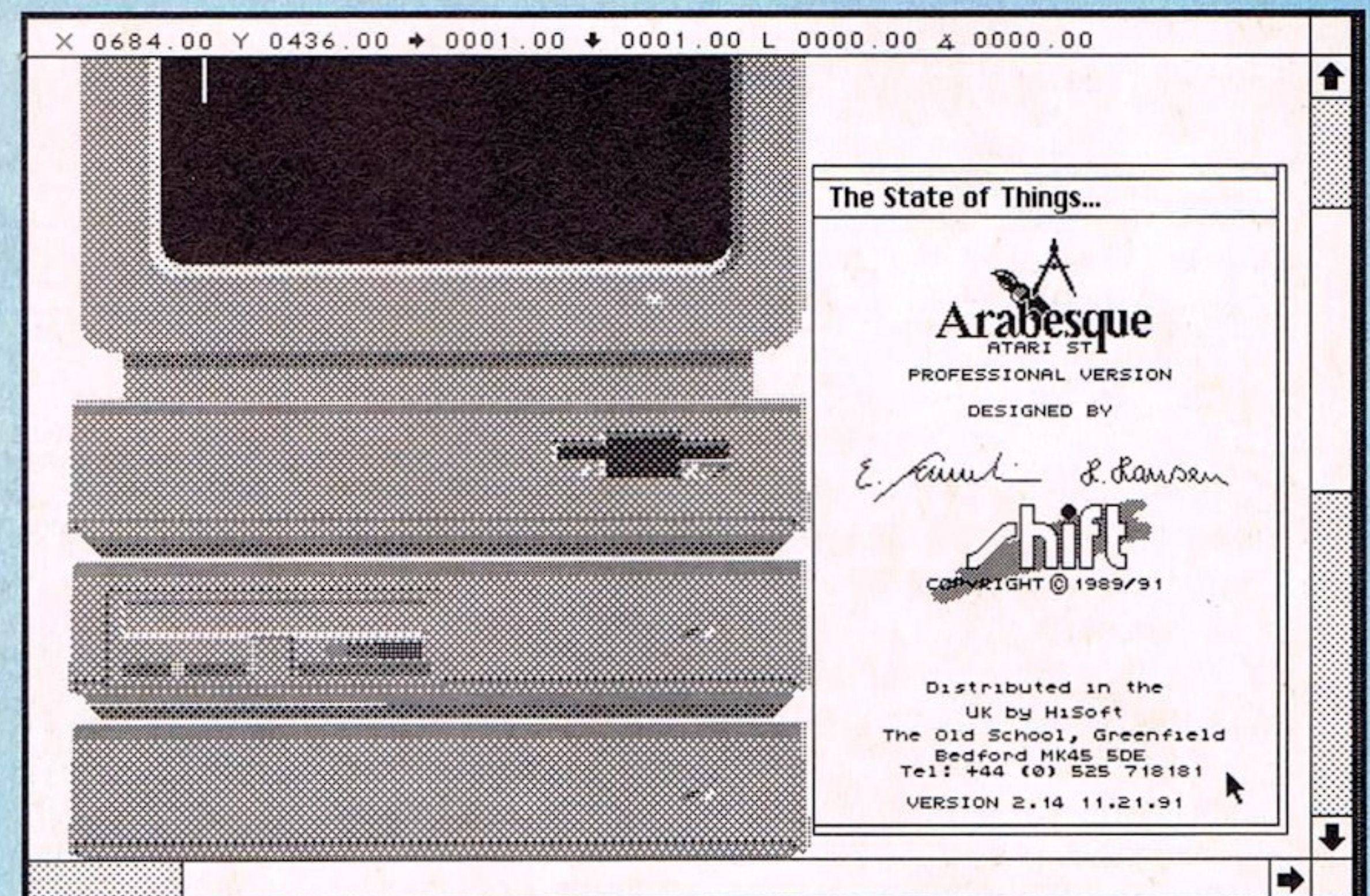
A bitmap image is a graphic which is made up of individual points, or pixels. The position of each pixel is recorded and can be manipulated by your ST. Each point is a set size and can be individually set or removed. Bitmap graphics are used for creating images with very fine detail and image manipulation and special effects are very effective when used on a bitmap image. The only problem with bitmap images is that they become very blocky when you enlarge them or print them at a greater size, this is because each pixel is enlarged and fine detail is lost.

MEMORY CONFIGURATION

The amount of memory used by *Arabesque* can be configured by holding down the <Alternate> key while the program is loading. A special memory menu appears enabling you to set up the memory usage. The total amount of memory available is displayed alongside a box enabling you to adjust the amount allotted to *Arabesque*, all displays are in K.

You can also set up the number of pages allocated to vector graphic mode, *Arabesque* defaults to two pages of 32K and 64K respectively, but you can change this to suit your memory requirements and assign up to 250K per vector graphic page.

Finally you can indicate if you are using an Atari laser printer, clicking on the laser option allocates 1MByte to the laser. When everything is set up as you wish click on the OK icon to enter the main program. You can save your setup by using the Save Parameter option in the Load/Save menu.



■ Arabesque is a professional drawing tool designed to be used alongside desktop publishing software, providing a perfect tool for creating either

disk as your working copy. If you have a hard drive then use the INSTALL.PRGM on your backup disk and follow the instructions as they appear on-screen. If you prefer you can simply copy the contents of the disk to a partition called ARABPRO, the program works perfectly.

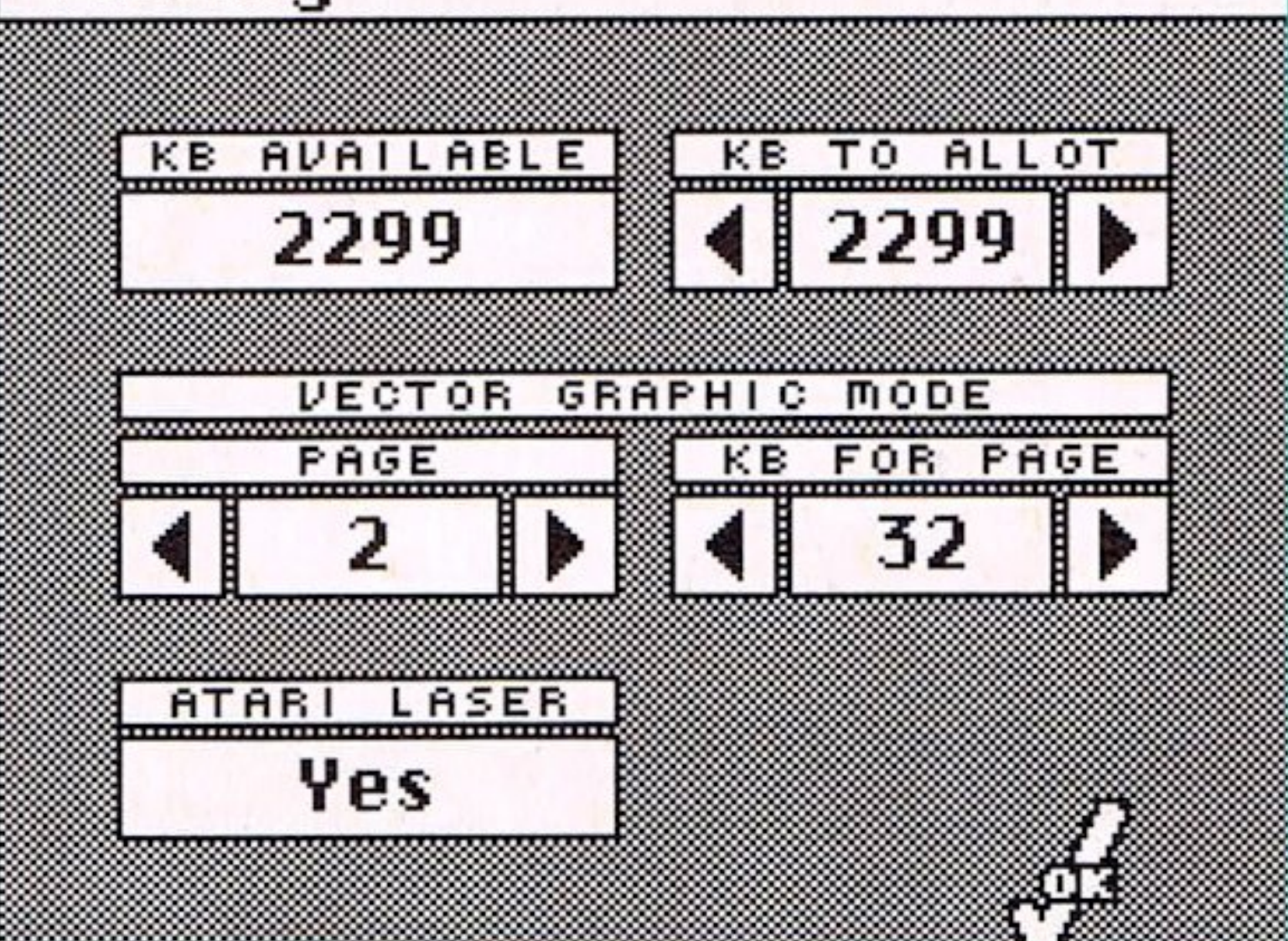
Using the tools

Run ARABPRO.PRGM and wait for the main bitmap menu to appear on-screen. This menu is a pop-up

box full of icons that appears every time you make a right mouse click when you are creating an image. Each option on the menu is accessed with a left click on its icon and most can be configured by right clicking on them, this takes you to a sub-menu.

Try out each of the drawing options in the top two rows of icons, just experiment with them until you get the feel of how they work. Pressing the right mouse

Memory



■ Decide how much memory to allocate to Arabesque and the maximum number of vector graphic pages.

Vector graphics

A vector image is not stored as individual points but is defined as a set of mathematical terms. This means that only co-ordinates, fill patterns, size and other information is stored. When a line is drawn as a vector graphic the start and end points are stored and the relative distance between them, in effect a description of the line is stored. Because each part of a vector graphic image is stored as a separate object any object can be changed or replaced. Another advantage is that you can enlarge a vector image to any size with no loss of detail.

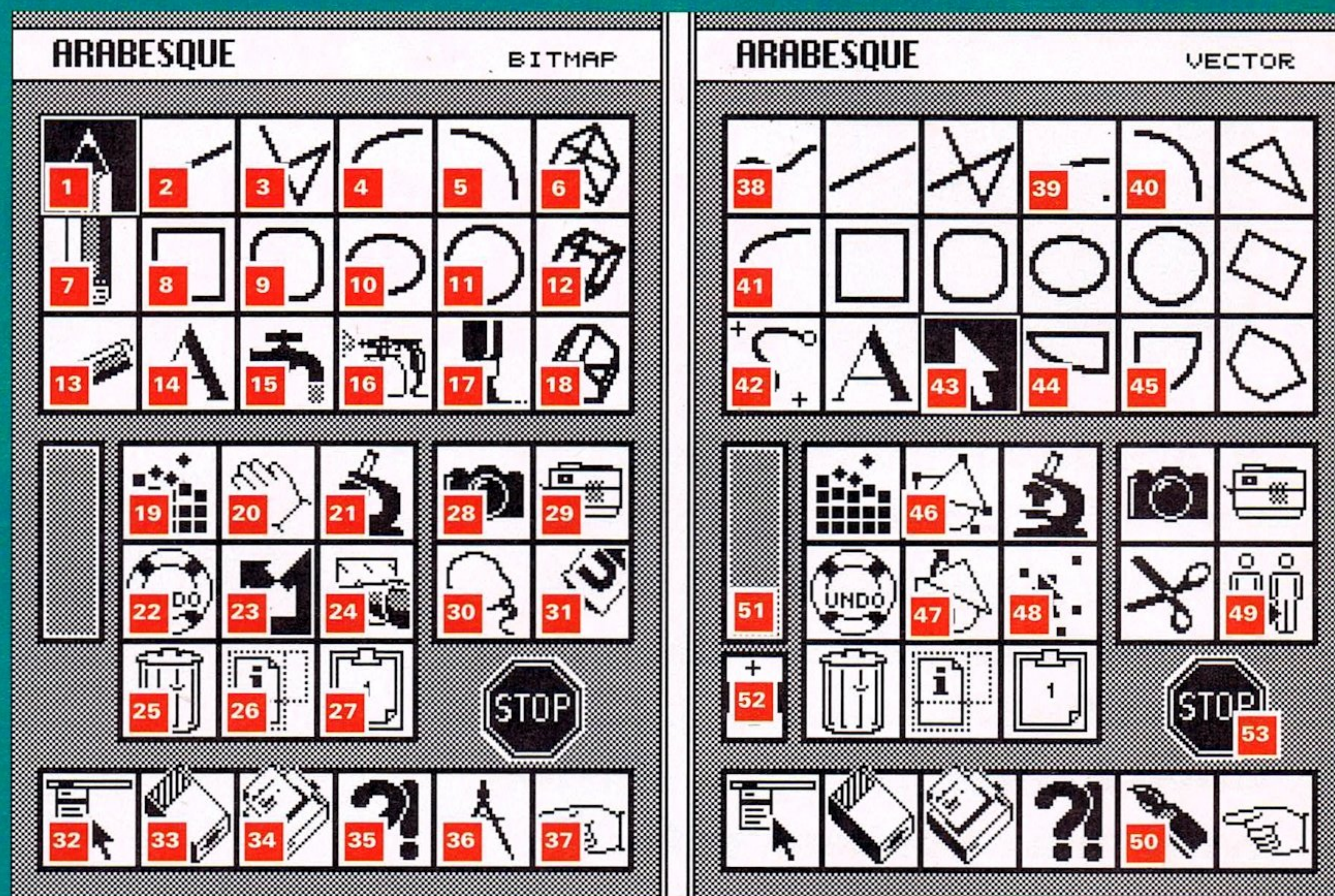
button exits from each drawing function. If you right click on a drawing icon you can adjust the drawing parameters. The width, style, fill pattern and drawing mode can be changed from this menu. Clicking on OK enables the changes you have entered, while clicking on Cancel – the running man icon – takes you back to the main screen. You can also call the drawing parameter menu by pressing <Help> after selecting a drawing function. The menu bar across the top of the screen shows the current cursor position and other position data.

File support

Arabesque supports a variety of file types for both bitmap and vector graphics. The program has its own unique file format in both modes because images can be larger than the screen.

In bitmap mode Arabesque imports and saves mono GEM Image files with an IMG extender, STAD files with a PAC extender, Degas files in any resolution with both PI? and PC? file extenders and

THE MENU MASTER



The main menus of both modes look very similar, in fact many of the functions are identical. Here's a breakdown of the icons in both the bitmap and vector menus, all options are started with a left click and finished with a right click

- 1 FREEHAND DRAWING:** draw on-screen using the mouse.
- 2 LINES:** draw lines between two points.
- 3 LINE SETS:** draw linked lines, each new line starts at the end point of the previous line.
- 4 BÉZIER CURVES:** enables smooth curves to be drawn through a series of points.
- 5 ELLIPSE ARC SEGMENTS:** connect two points with an elliptical arc segment.
- 6 TRIANGLES:** draw triangles, these can be either two or three dimensional.
- 7 ERASER:** definable eraser, can be any size you like.

mono Amiga files with the IFF extender. You can load other file formats by selecting the "Other" option on the loading menu.

Arabesque bitmap files are saved with an ABM file extender. Arabesque can also load and save the contents of the block buffer

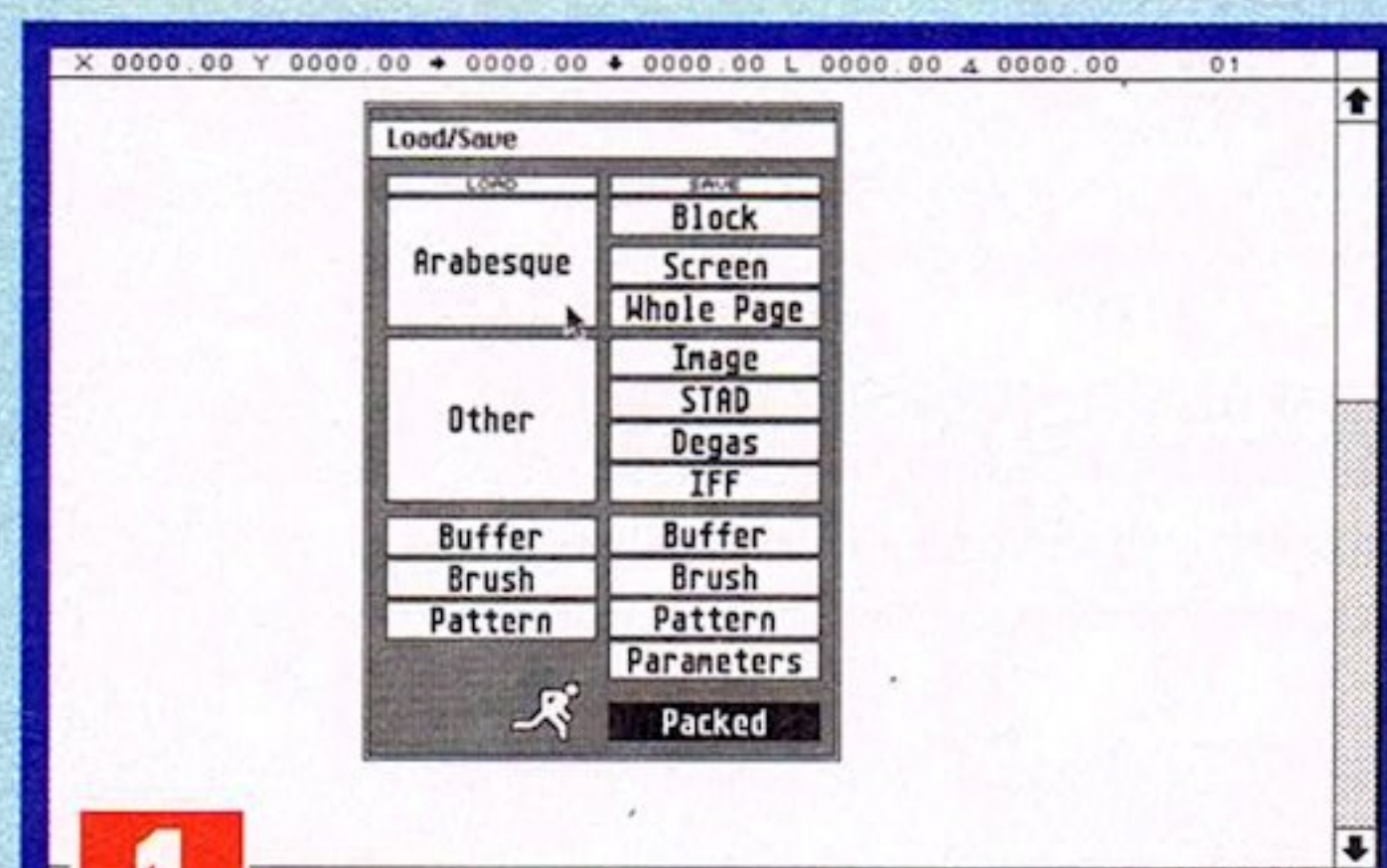
along with customised brushes and fill patterns.

In vector mode Arabesque deals with three file types. Calamus

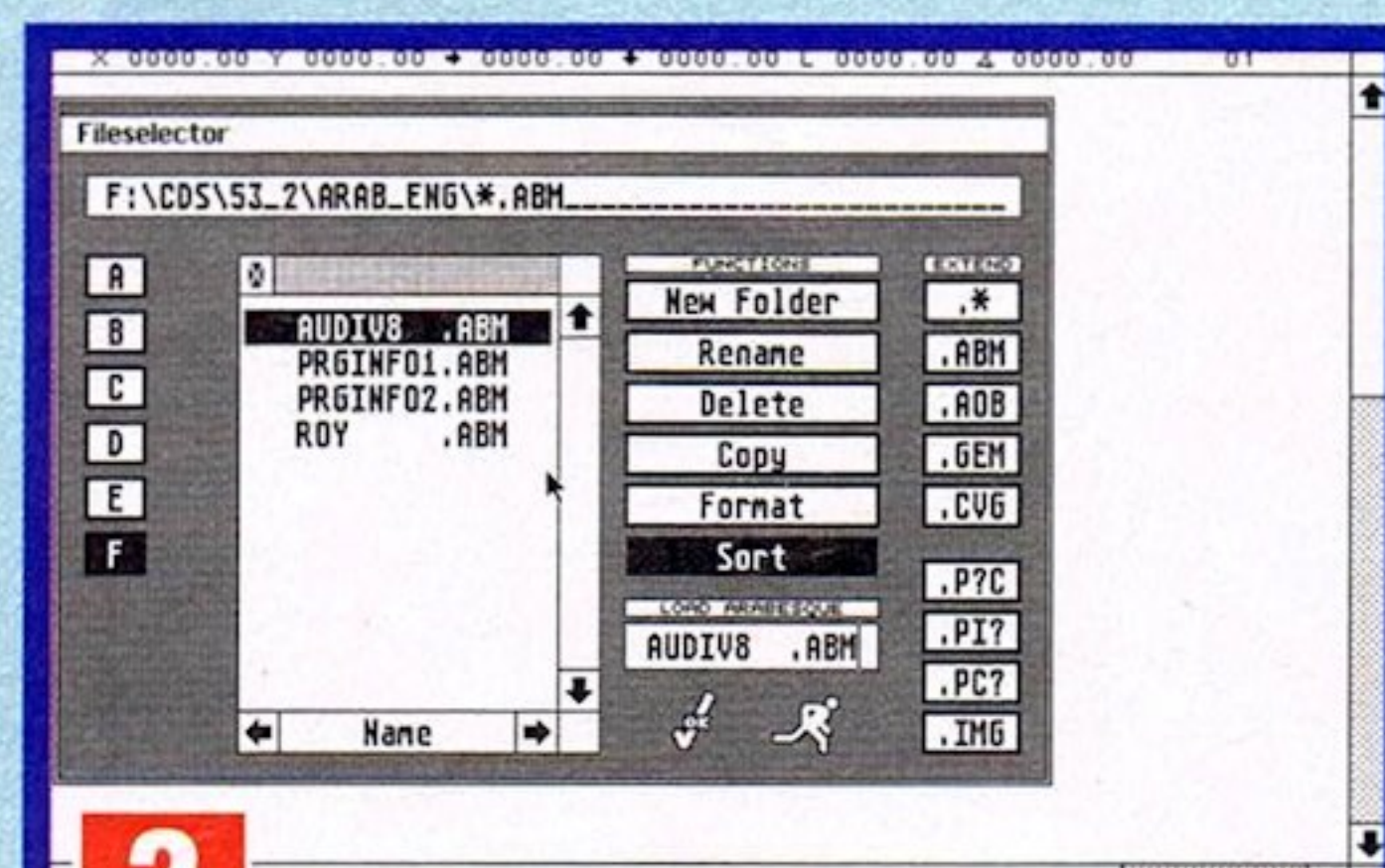
LOADING AND MANIPULATING PICTURES

Once you've played around with the program for a while, clear the screen by selecting the dustbin with the right

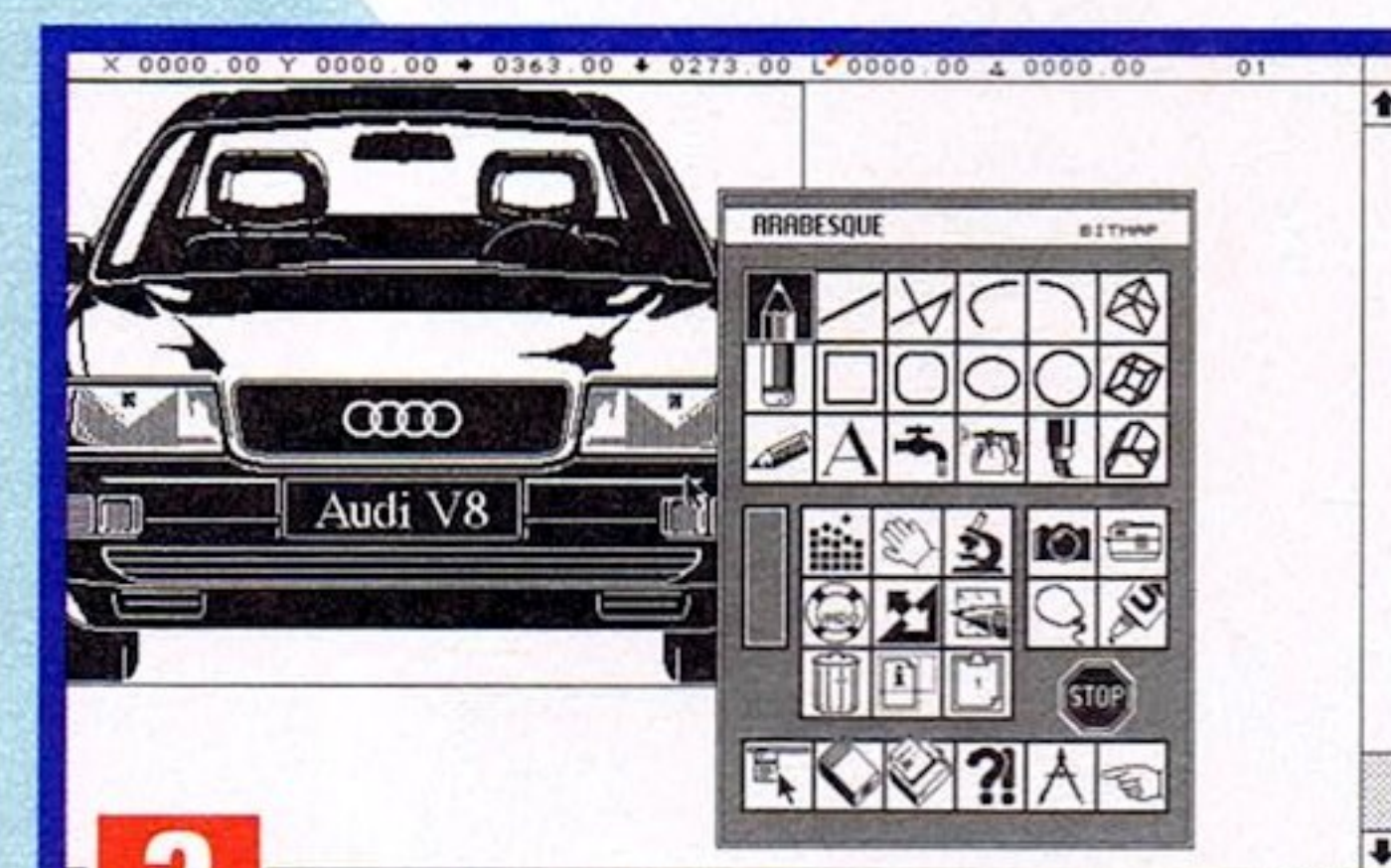
button or press <Shift> and <Clr Home> together. The next step is manipulating a bitmap picture



- 1** Select the disk drive icon in the main menu with the left mouse button, the file menu appears with two columns - one for loading and one for saving. Select the Arabesque option in the loading menu and the file selector appears.



- 2** The file selector is not the standard one supplied by GEM, it provides many more options and a variety of disk functions and file masks. Select the file AUDIV8.ABM and click on the OK icon, ABM is the Arabesque bitmap file extender.



- 3** The picture loads from disk but only the outline of a box appears on-screen. If you move the mouse the box moves with it, a left button click pastes the image on-screen. This enables you to position images exactly where you want them.

- 8 RECTANGLES:** size is defined with two clicks, a third click pastes it down. All enclosed shapes can be filled or transparent.
- 9 RECTANGLES - ROUNDED CORNERS:** the same as Rectangles but with round corners.
- 10 ELLIPSES:** create ellipses defining vertical and horizontal length.
- 11 CIRCLES:** create filled or transparent circles.
- 12 PARALLELOGRAMS:** you can create 2D or 3D parallelograms with this function.
- 13 SINGLE POINTS:** draw and erase single points.
- 14 TEXT:** if you are not using GDOS then you can convert GEM and Signum fonts to use in *Arabesque*.
- 15 FILL:** fill enclosed areas with patterns.
- 16 SPRAY CAN:** spray areas with fill patterns.
- 17 PAINT BRUSH:** paint using current fill pattern and with various brushes.
- 18 POLYGONS:** create 2D or 3D polygons with this function.
- 19 BITMAP TO VECTOR:** places bitmap images into vector graphic mode.
- 20 MOVE PAGE:** moves the drawing instead of using sliders.
- 21 ZOOM:** enlarge drawing area for very detailed work.
- 22 UNDO:** cancels last operation.
- 23 INVERSE:** reverses picture colours.
- 24 CLIPPING RECTANGLE:** restricts all functions to a defined area.
- 25 DUSTBIN:** right clicking on the dustbin clears the current drawing.
- 26 FULL PAGE VIEW:** view full page or define new page size.
- 27 CHANGE PAGE:** switch between drawings in memory, you can work on 20 at one time.
- 28 CUT BLOCK:** cut a rectangular area to the block buffer.
- 29 PASTE BLOCK:** paste rectangular block from the block buffer.
- 30 CUT IRREGULAR BLOCK:** cut an odd shaped block, join start and end points to finish.
- 31 PASTE IRREGULAR BLOCK:** paste an odd shaped block from the block buffer.
- 32 DESK ACCESSORIES:** access Desk Accessories from within *Arabesque*.
- 33 DISK DRIVE:** load or save files, access disk utilities.
- 34 PRINTER:** print page, screen or selected area.
- 35 DRAWING AIDS:** set general parameters of *Arabesque*.
- 36 VECTOR MODE:** switch to vector graphic mode.
- 37 INFO:** *Arabesque* caveats.
- 38 FREEHAND DRAWING:** draw on-screen using the mouse.
- 39 ELLIPSE SEGMENT:** create part of an ellipse.
- 40 CIRCLE SEGMENT:** create part of a circle.
- 41 CURVES:** draw a line and pull it out into a curve.
- 42 BÉZIER POLYGONS:** create complex polygons using Bézier curves.
- 43 SELECT OBJECT:** use this arrow to select an object prior to manipulating it.
- 44 ELLIPSE SEGMENT:** create part of an ellipse.
- 45 CIRCLE SEGMENT:** create part of a circle.
- 46 OTHER MANIPULATIONS:** calls another icon toolkit with many more functions.
- 47 CHANGING POINTS:** enables individual points of a vector object to be moved.
- 48 SELECT/DESELECT ALL OBJECTS:** enables you to move all objects at once.
- 49 DUPLICATE OBJECT:** copy any vector object.
- 50 BITMAP MODE:** switch to bitmap graphic mode.
- 51 CURRENT FILL PATTERN:** click here to change pattern.
- 52 BÉZIER ADJUSTMENT:** fine tune the precision of Bézier curves.
- 53 STOP:** quit *Arabesque*.

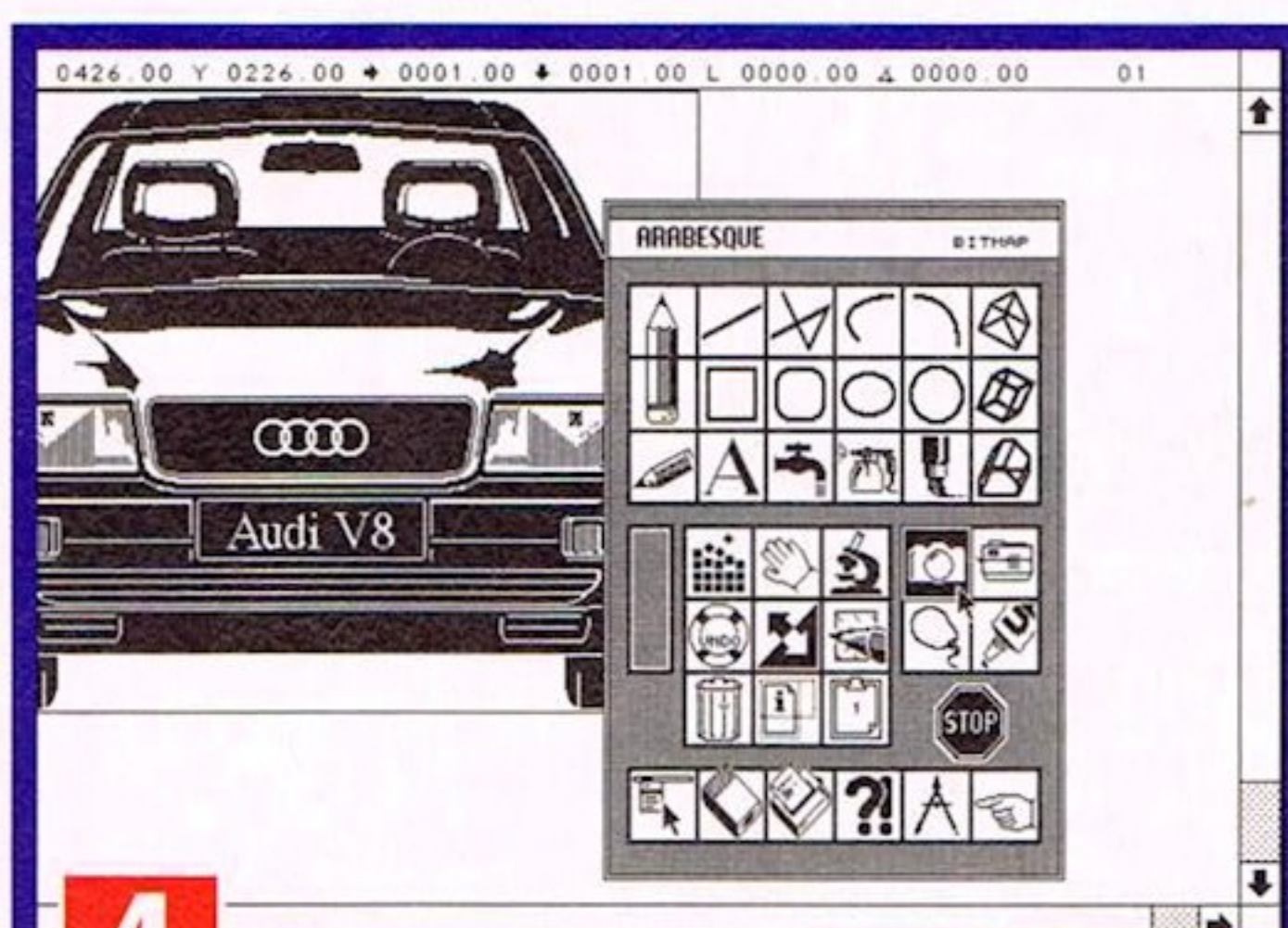
CVG and GEM/3 Metafile, both of these files can be loaded or saved along with the third, default *Arabesque* AOB file type. You can

also save vector buffers and patterns to disk.

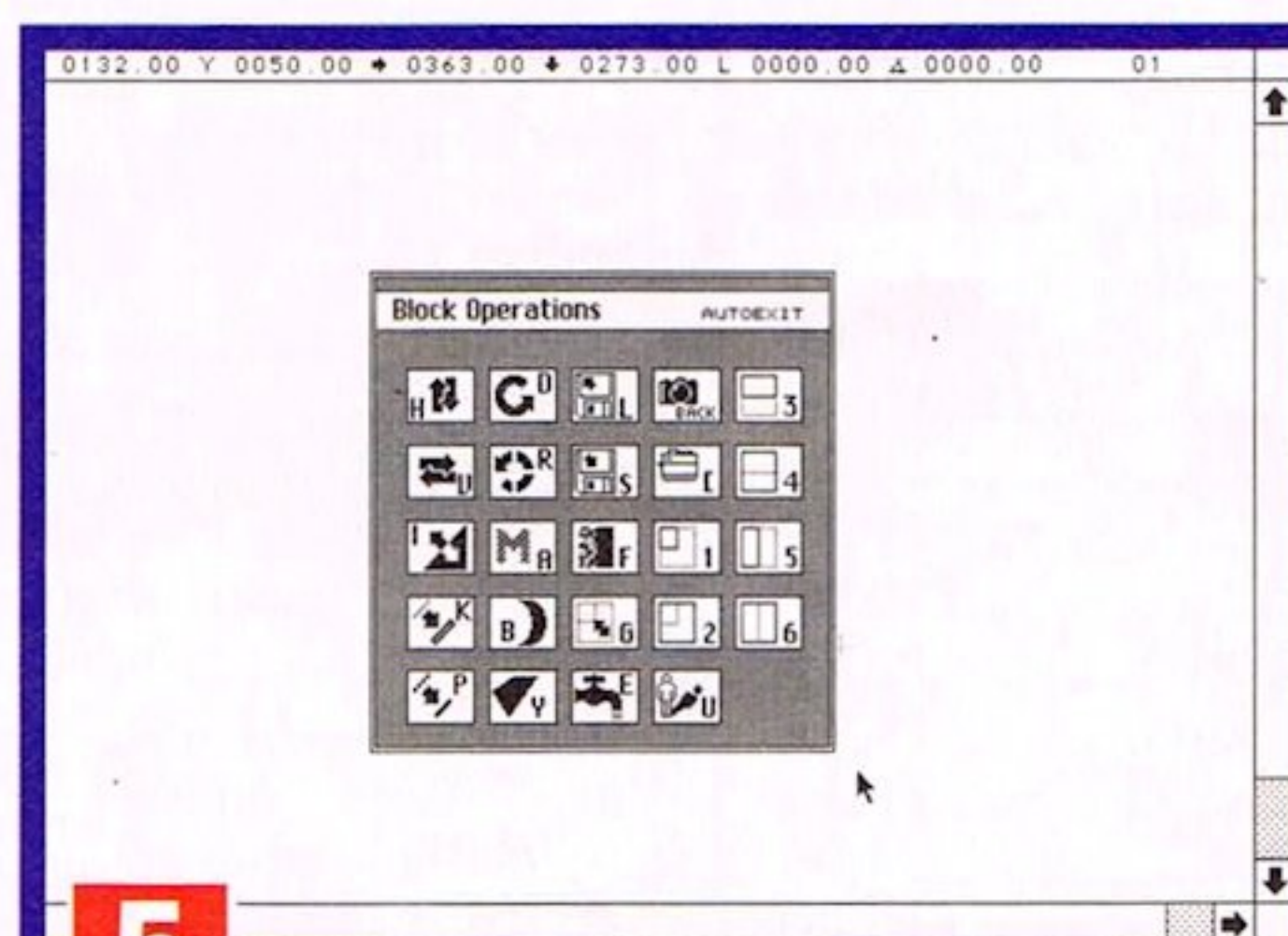
The export modes in *Arabesque* make it an ideal com-

panion program for any serious desktop publishing work, the bitmap and vector export options mean that your pictures can be

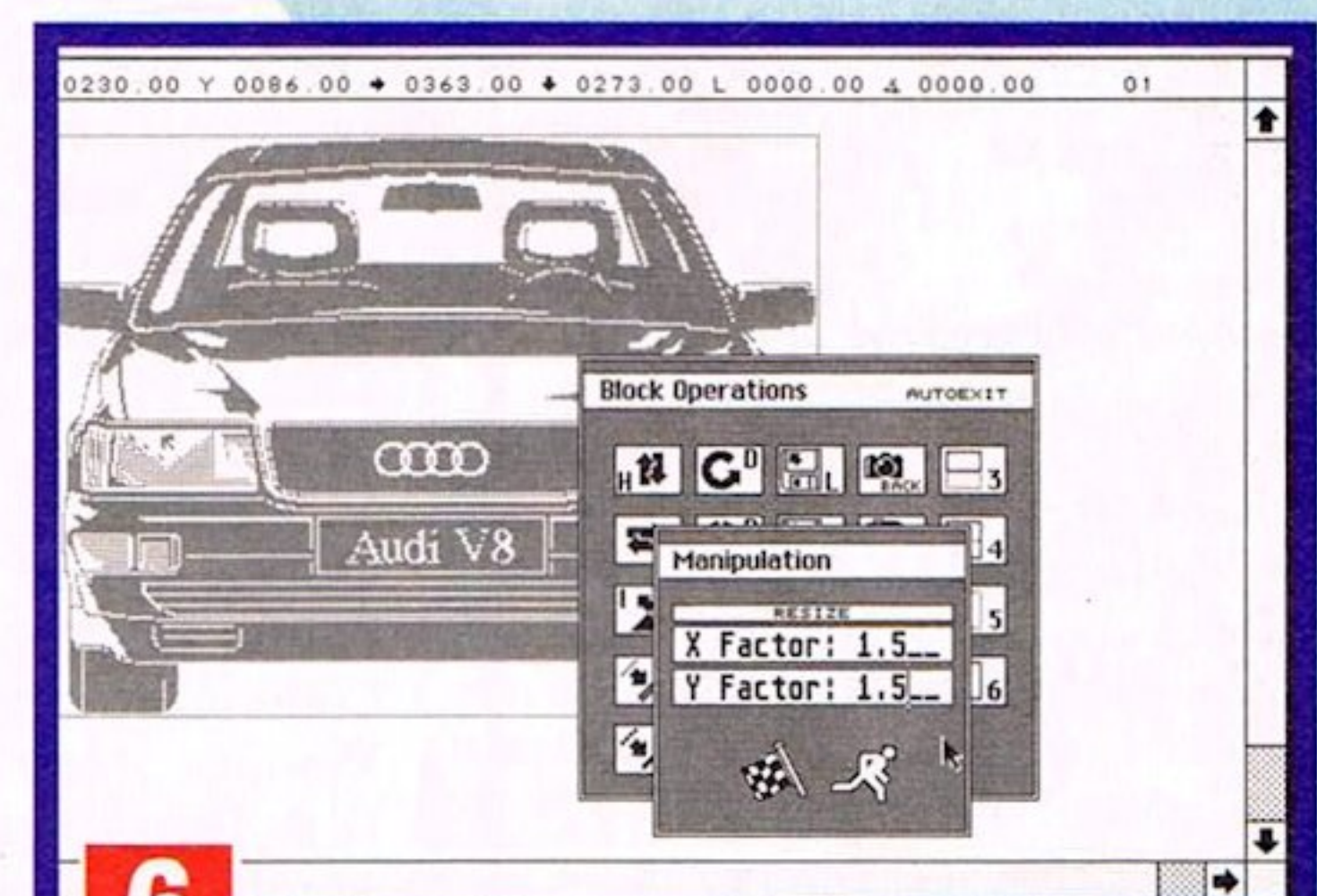
imported directly into major DTP packages, such as *Pagestream* and *Calamus*, on your ST. So what are you waiting for? Get cracking. **stf**



4 The next step is to copy the image of the car to the block buffer. Click on the camera icon and then left click at the top left of the image, now drag a box around the car and left click again. The image is now ready to be manipulated.



5 Clear the screen using the dustbin icon and right click to return to the drawing screen. If you now press the <Help> key the block operations menu is displayed enabling the image in the buffer to be twisted, turned, squashed, stretched and poured.



6 Many of the options in the block operations menu have further sub-menus beneath them, accessed by a right click over the icon. Here we're resizing the image to 1.5 times its original dimensions after fading it to grey.

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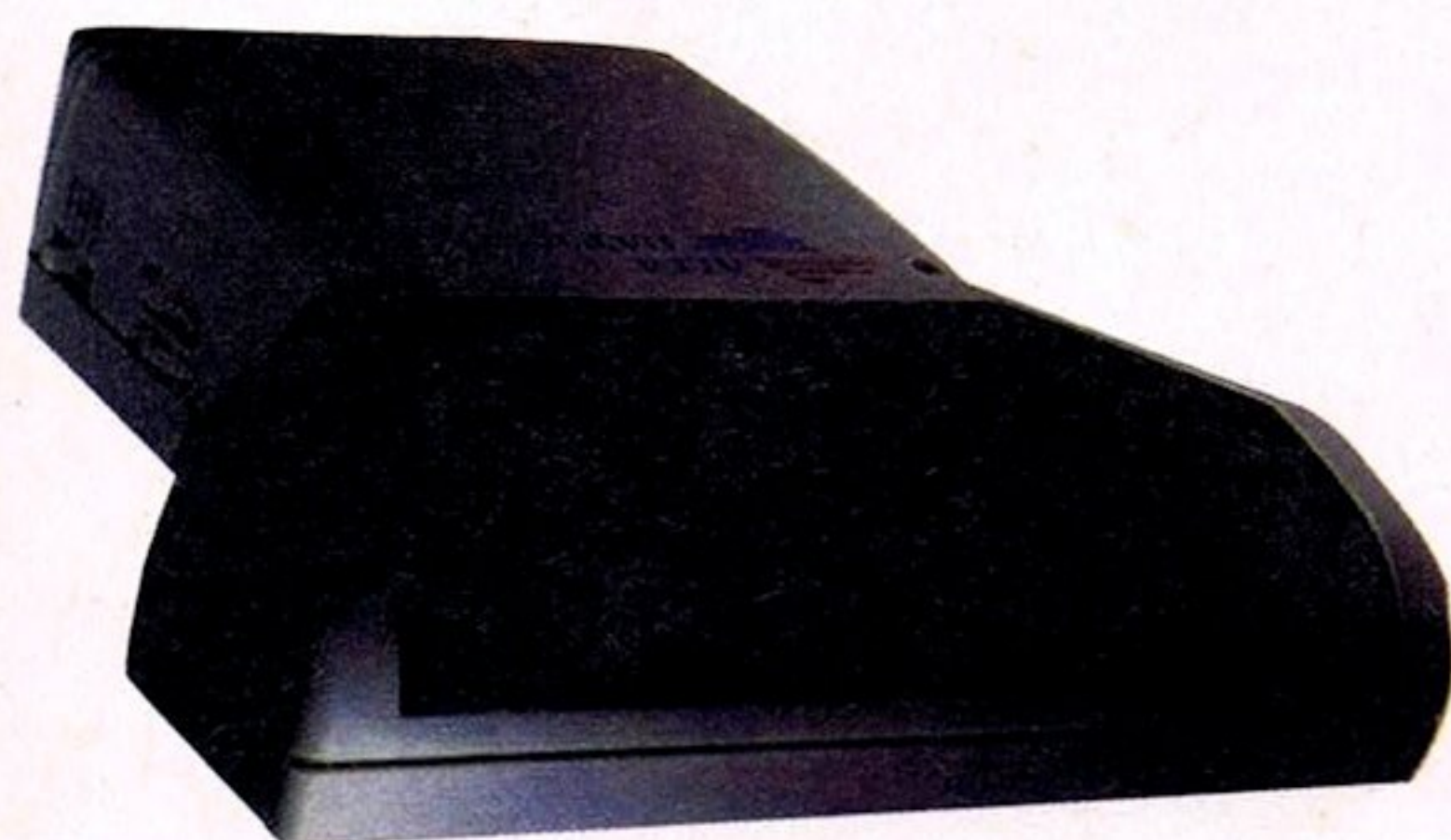
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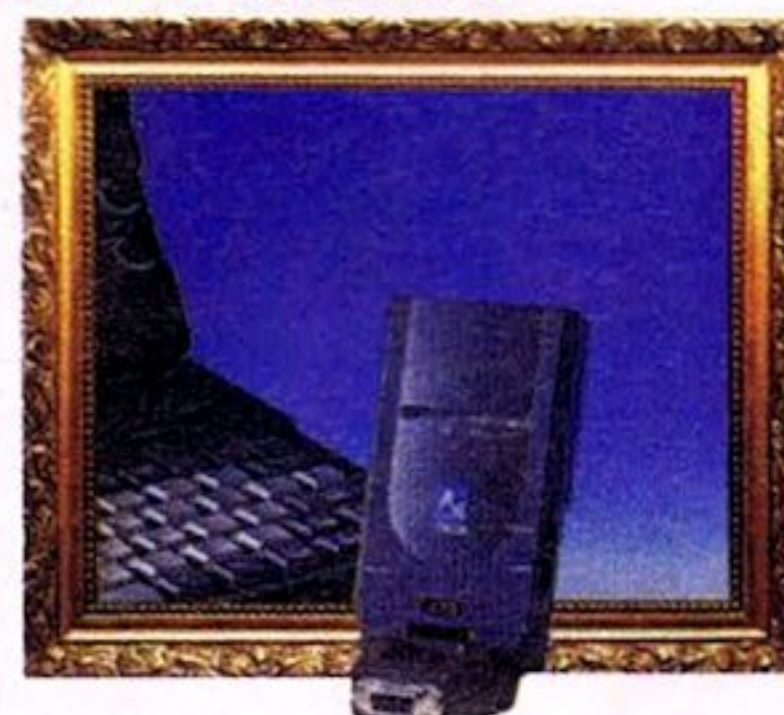
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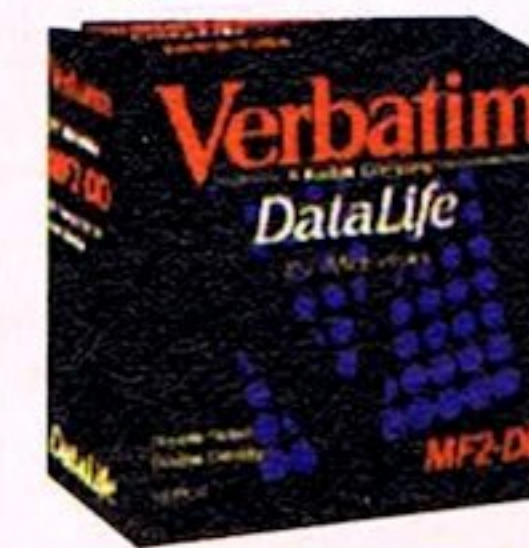
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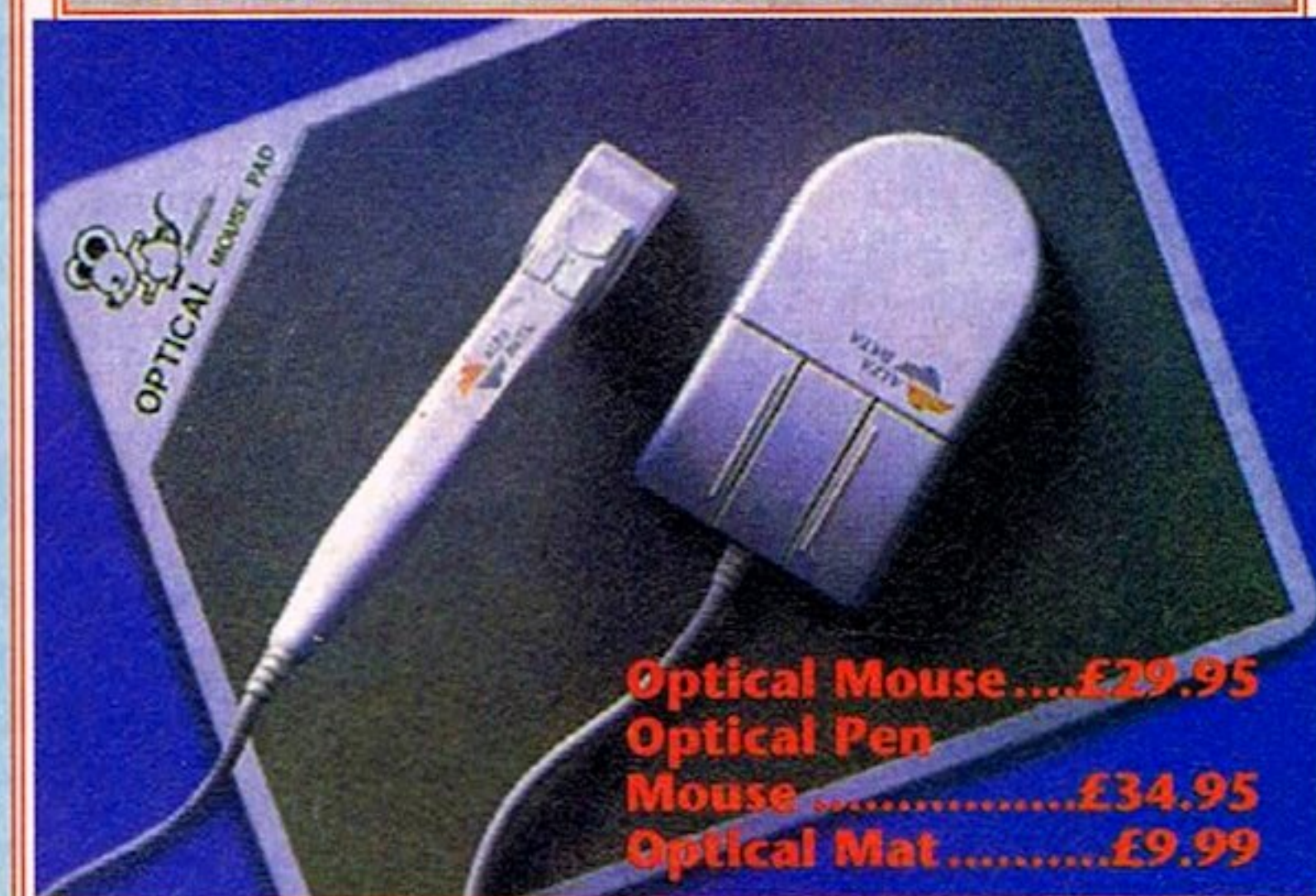


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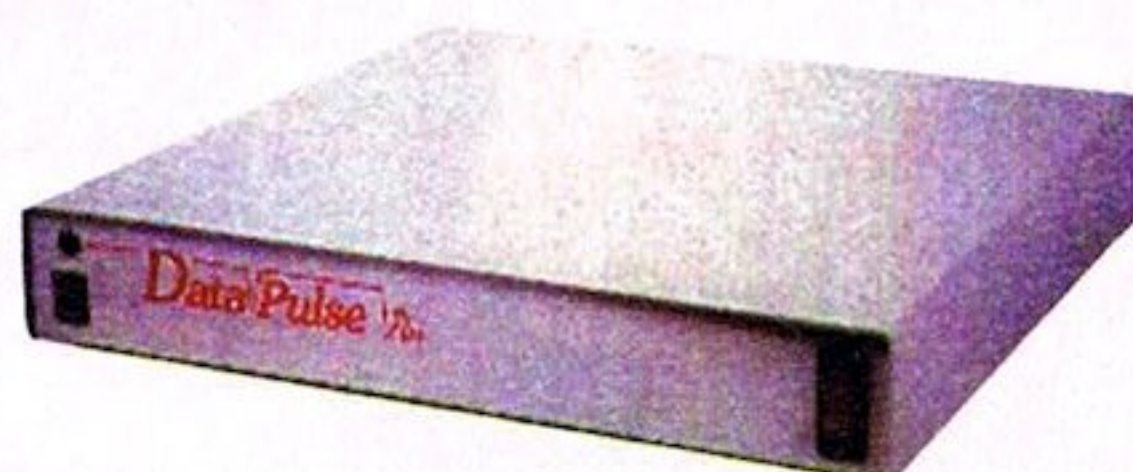
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Unpopulated Marpet board £28.00
See SIMM prices below.

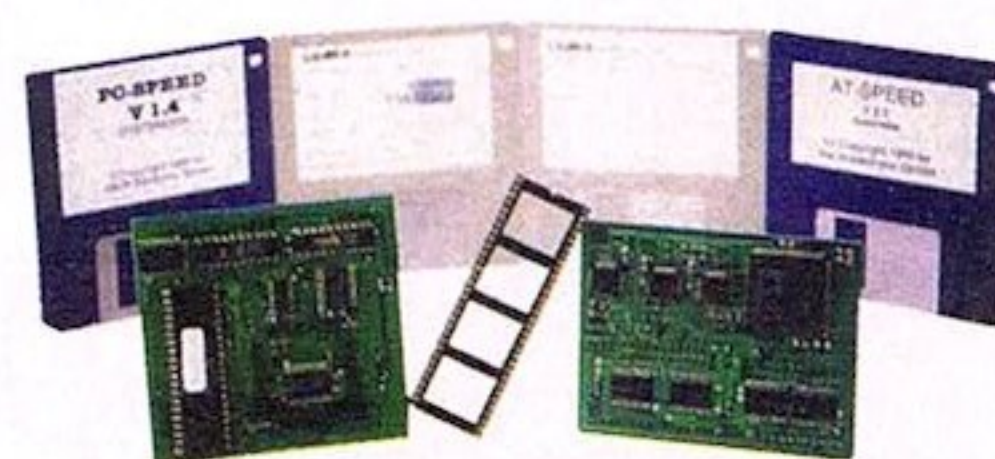
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- Full installation instructions.
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Our Atari trained technicians can repair ST's in minimum time at competitive rates. We can arrange for fully insured courier pickup and return delivery of your machine to ensure its safety. We even have a same day service which will ensure your machine is given priority and subject to fault, completed the same day.

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HP Deskjet 510	£299.99
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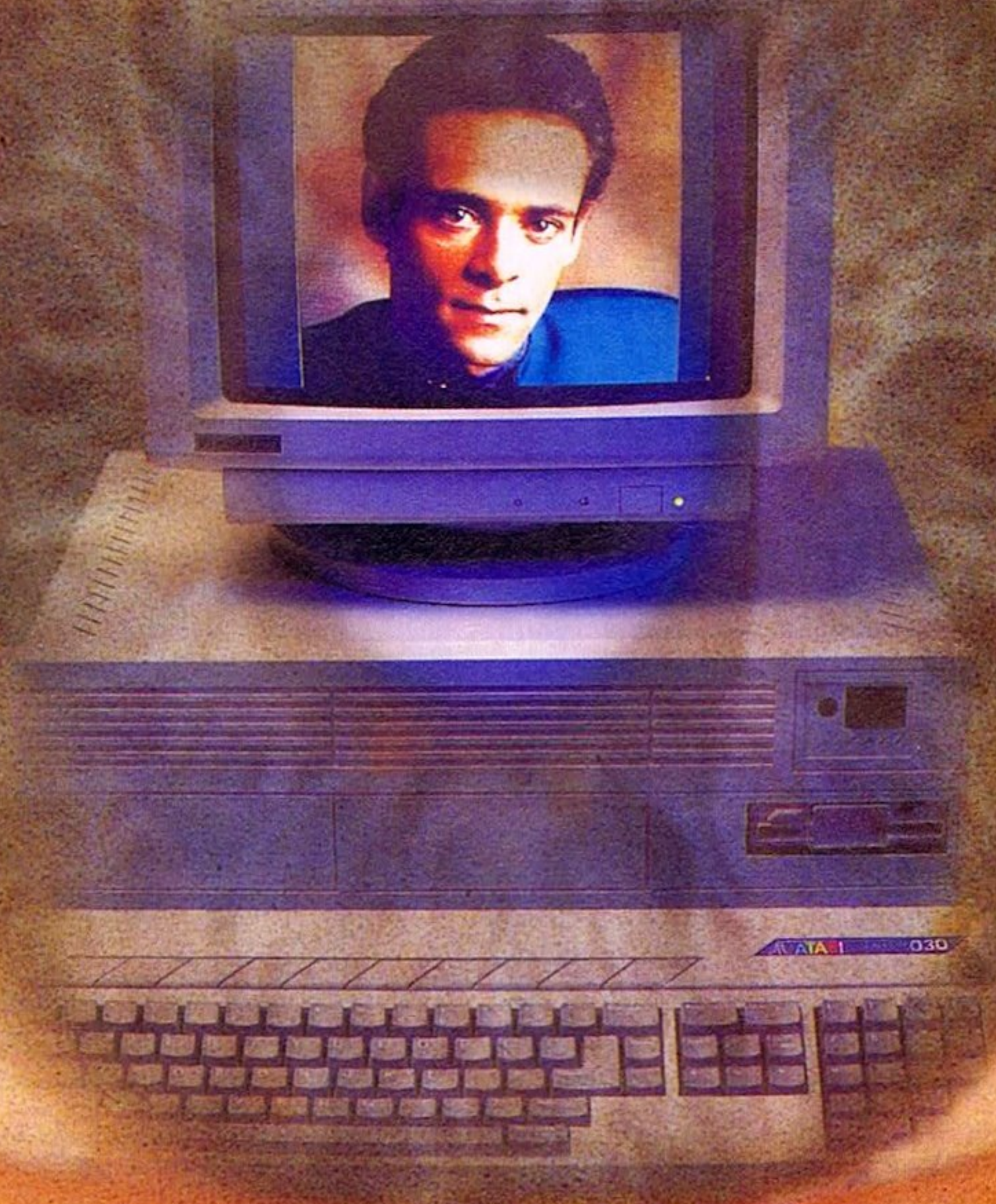
- Star SJ144 £549.00
- 144 Element print head
- Colour 14 page per minute
- 360 DPI resolution
- Emulates Epson LQ860, IBM Pro Printer & NEC graphics

Ricoh LP1200	£699.00
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● 400 Dpi	
● 12 months on site warranty	

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THE FALCON

AS GOOD AS THEY SAY?



The Falcon. We've all heard of it, we all know it's a brilliant machine and we all know that it comes from Atari. But should you buy one? Paula Richards and Clive Parker investigate



The fact that the Falcon comes from Atari doesn't do it any favours. You can be sure that the technology's likely to be world-beating, the price is likely to be reasonably affordable to anyone in the market for a brilliant new computer, but what about the software? Can we expect to see another STE situation where there's great new technology which would make your games look and sound so much better than they did on your old STFM, but no software houses supporting it – until three years later when Ocean broke the mould with the STE-only *Sleepwalker*.

None of the Mega machines made much of an impact on the market – if you've got one then you're among only 3% of our readers who have, likewise TT-owners

are few and far between. Why is this? Is it because Atari didn't sell the capabilities

"This year has been one in which Atari have been preparing themselves"

of these computers, because they didn't offer sufficiently different features to the other machines or

advantage of its capabilities. The fact is that if no-one buys the Falcon very little software is ever going to be written for it. And conversely, if no-one writes the software no-one's going to buy the machine – not outside the very specialist markets, anyway.

This year hasn't, on the surface, been a particularly good one for Atari – they've made huge losses and they seem to have taken a trip into the dark ages by rereleasing the STFM, albeit at a bargain price. They are looking to consolidate their product line, claiming that after November

was it because no-one outside of the sheltered Atari community had ever heard of these machines? It's bad enough having a computer that nobody's ever heard of but things are even worse when you realise that nobody's going to produce software to take

THE LONDON ATARI SHOW

The recent London Atari Show attracted a good number of Atari enthusiasts, many of whom were mainly interested in seeing the Falcon and what it is capable of. Clive Parker asked some of the visitors their opinions of Atari and the Falcon

"I think that the Falcon is great technically and is one of the top machines on the market, but I just can't see it getting the success that it deserves.

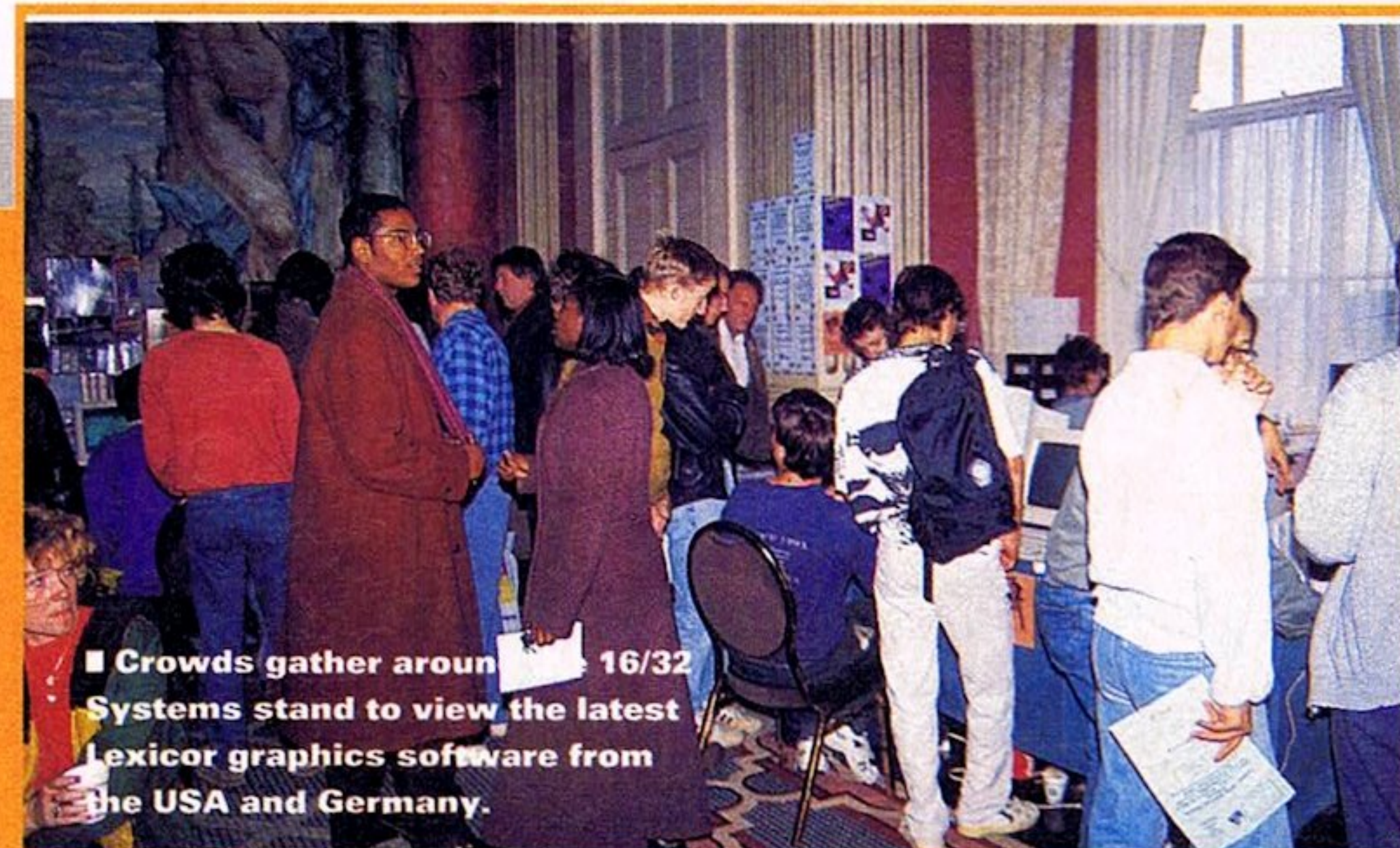
It should never have been put in an ST style case and hardly any-

one outside of the ST world has heard of it."

Atif Hamid, Birmingham

"I am most impressed with the Falcon; Atari have fixed the small gripes I had with the ST and have done so much more. It's a very good multi-media workstation which copes with what I wish to do adequately, with no upgrading. It has extremely good graphics, sound and serious application capabilities.

I think it's great that Atari have standardised the Falcon with a high density floppy drive, SCSI2 connector and bi-directional



printer port. At the moment the software library is not vast, but there are some good PD and commercial programs for it already. It

won't take too long for the software base to become much larger. It's a shame about Atari's advertising reputation. Hopefully they can



■ The Falcon may look like a darker version of the STE but it's actually a completely different computer. The new hardware throbbing quietly beneath the familiar diagonal vents enables the latest Atari computer to outperform dedicated graphic workstations and record sound at better than CD quality directly to hard disk.

you're going to have a hard time finding an STE. These machines have also come down in price recently, to under the £200 mark. It looks as if Atari are squeezing the last drop of profits out of their older machines and trying to start afresh with a new look lineup – the start of the Falcon and Jaguar families, with the technologically brilliant Lynx taking a less interesting role but certainly remaining present during the first quarter of 1994. Darryl Still, the UK's Marketing Manager, insists that this year has been one in which Atari have been preparing themselves ready for a major onslaught next year.

Whatever happens next year, it is still true to say that they have been plagued, during the rather long and drawn out release of the Falcon, by external forces – difficul-

ties with the manufacturers in the Far East, lots of talk and action by Commodore with the A1200 and other higher spec machines and with the console boom diverting attention to Sega and Nintendo for those people who just wanted a machine to play games on. But there are also problems of their own making – promises they didn't keep to very strictly like the fact that you'd be able to get a Falcon early in 1993 and there would be a massive library of software available, the previous wonder machines of Atari that never actually materialised into anything remotely significant – and then there was talk of the new casing – some people at Atari liked to drop hints that there would be one, but that never came to anything either... though there are still rumours. The list goes on.

Atari seem to think that now they can put all that behind them and make their company a success with their new leaner lineup. Paul Welsh, Atari's UK Sales Manager is certain they are going to succeed – he reckons that with the help of the Jaguar they are going to be back on the financial roll they were on four or five years ago when the ST

was at the peak of its popularity – they reckon they're going to sell \$400 million worth of Jaguar software and hardware over the next 12 months. They're also supported by leading players in the ST market. David Link of Hisoft reckons that "Atari are very well set for the



future." Neal O'Nions of Compo supports the Falcon wholeheartedly: "Atari are selling a system that is ideal for everything."

If Atari decide to stay in the computer market (as opposed to attempting merely to lead the way in the console arena) – apparently what the Tramiels want to do, then they need to make the Falcon bring

■ The Falcon's graphical capability surprises everyone who sees it in action, pictures like this can only be viewed on ST computers using expensive additional graphics cards. The Falcon needs no extra hardware to view pictures with up to 65,536 colours.

them in some money. And they are now in a position to do so. The machine is here now. You can buy software for the machine. You can buy hardware add-ons for your machine so you can turn it into a PC and you can make it run at faster speeds. You can do things from this one box that have never been seen before. If you're remotely interested in remaining at the forefront of technology with your machine, you're going to want one, just because of its capabilities. To get any software on to the market Atari need to sell a lot of Falcons. Over the next few pages we show you exactly what the machine can do and try and assess whether it's actually going to succeed – what the problems it faces are – and whether you should actually go and out and buy one for yourself.

Atari themselves

OK, so we know Atari think they've got everything sussed out really well, but have they actually sat down and thought about who the Falcon is for and how this potential market is going suddenly realise that this machine is everything they've ever wanted and rush out and buy one immediately? If they haven't, the chances are that they won't have designed it with any coherence and certainly won't be able to sell it effectively. Fortunately they win on both counts.

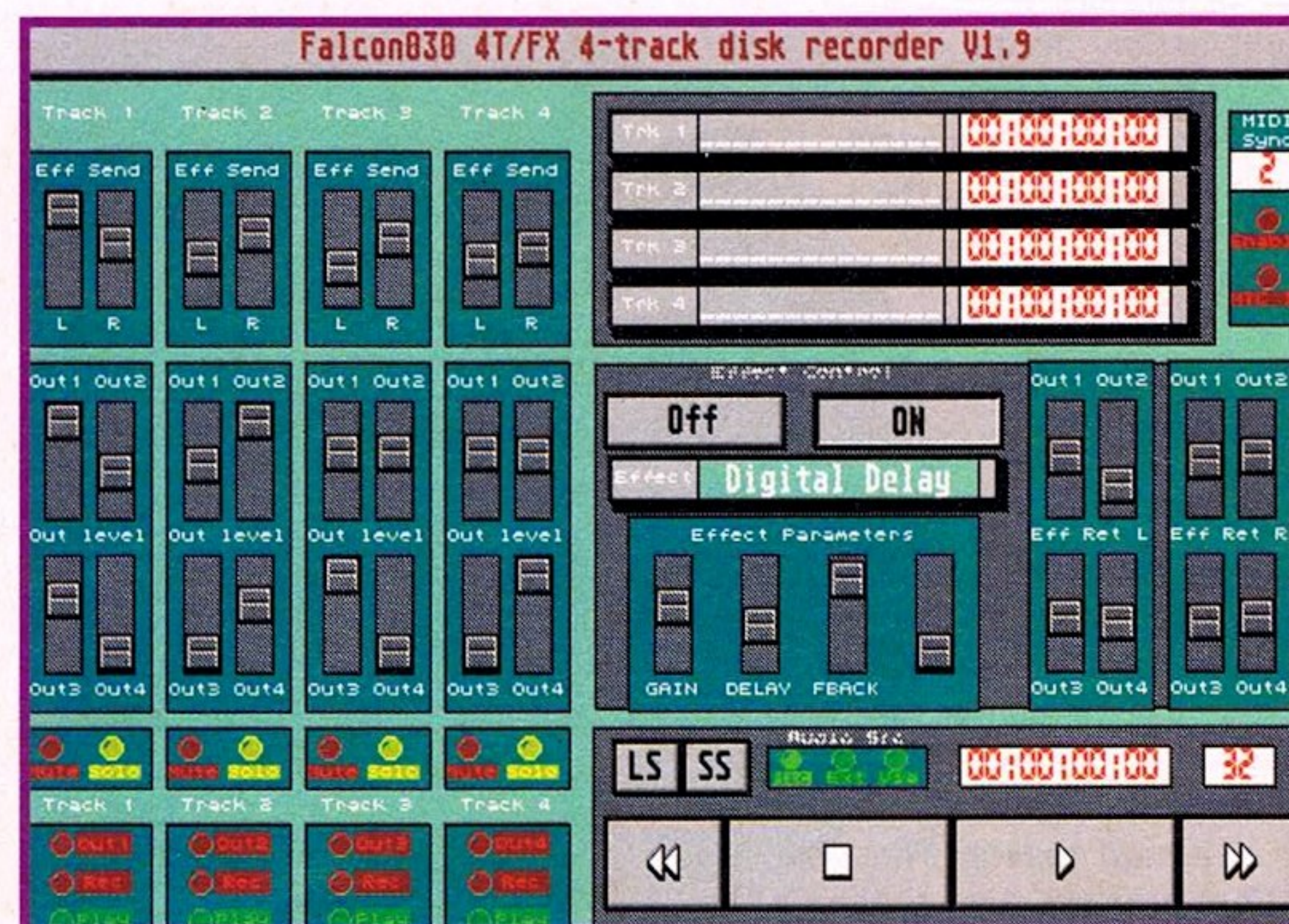
First they're looking to sell the machine to you. That's you, that is, the ST owner who wants to upgrade to a better machine. And according to Atari there are a lot of you who are interested in doing so. According to one of their surveys which was carried out in mainland Europe – Germany, most likely – between 70% and 80% of existing ST users intend to upgrade their

have a serious re-think and get the Falcon more well known. Most people I know have never heard of it!"

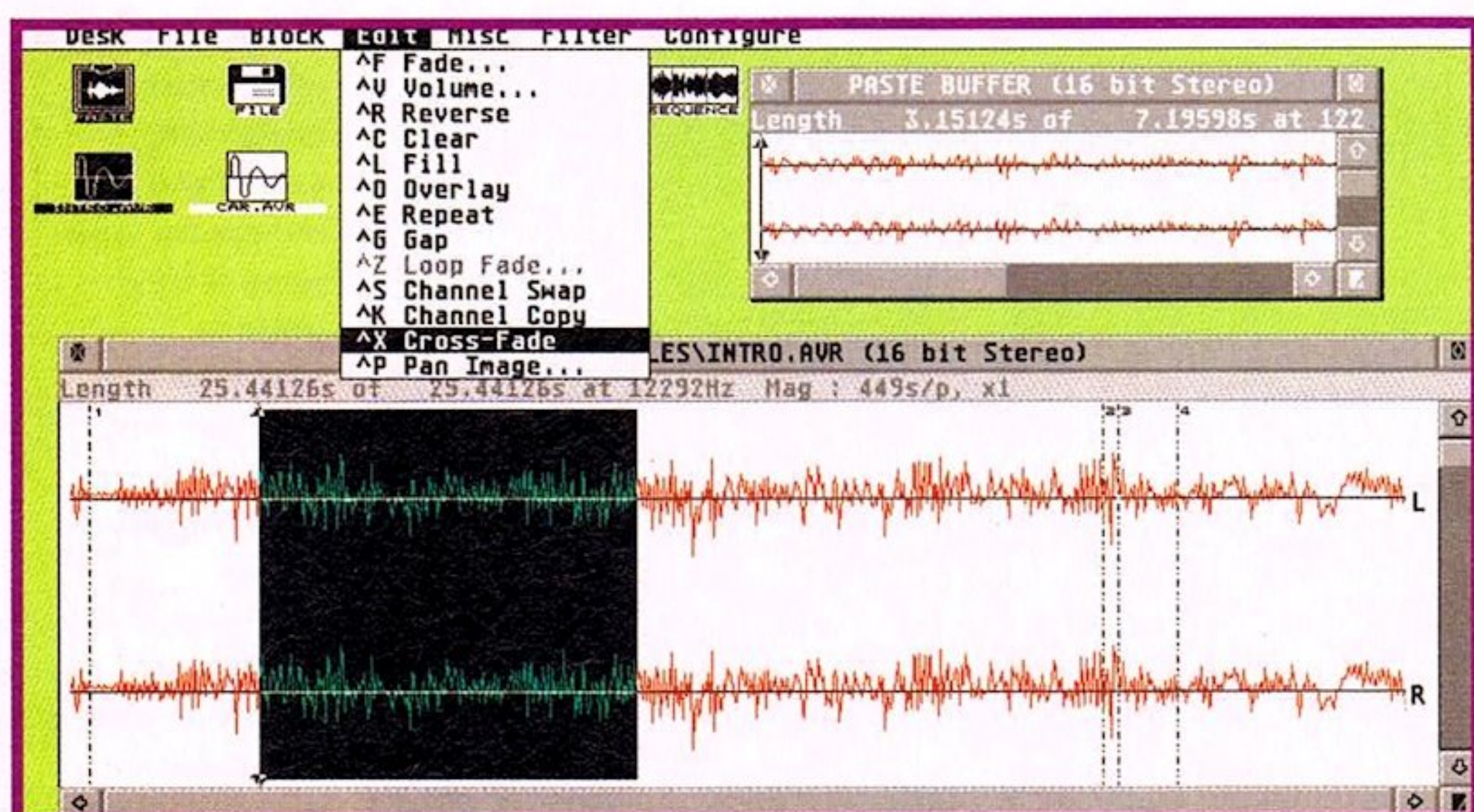
Andrew Gell, Bucks

"I love the new Desktop but that's where it ends. I dislike all those resolutions or rather, the fact that programs have to run in one resolution that you're not in and you have to change. This, along with the extremely poor support that I think Atari are giving the machine have put me totally off buying it. It's a bit too expensive as well!"

Lasse Eldrup, Denmark



■ The first professional direct to hard drive recording software for the Falcon gives an idea of what the machine is capable of.



■ AVR have adapted their 16-bit *Replay 16* software to run on the Falcon in stereo using its internal sampling hardware - no cartridge required!

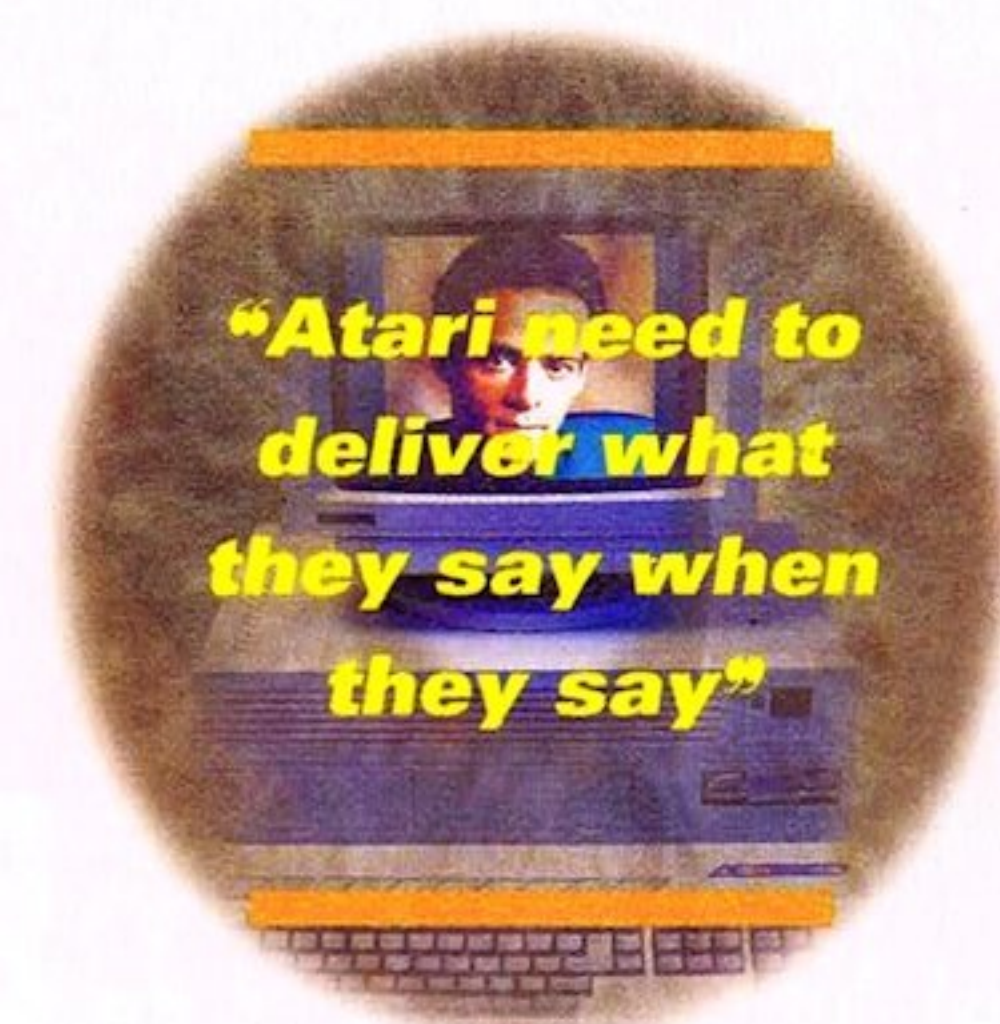
STs to Falcons. In the UK the figure is somewhat lower. According to the survey of *STF's* readers which we undertook earlier this year, 29% of you intended to upgrade to a Falcon within the next 12 months. Whichever set of figures you prefer to believe, Atari definitely have a potential market sitting there just waiting for the sign before they buy. A sign like some sort of advertising saying that the machine's available and that there's some

software available for it. You know how many ads you've seen in the specialist press, you make up your own mind on that one.

Second, there's the professional and home music market. The ST has been the most popular platform for years in this arena and, according to Paul Welsh (and there's no reason to disbelieve him), the Falcon can display qualities and features above and beyond that of the ST. The two

main players in the Harman Audio and EMagic with *Cubase* and *Notator*, both have Falcon versions imminent and they are running collaborative ads with Atari in specialist music magazines such as our sister mag, *Future Music*. See this as a smart move - they're selling the machine to fulfill a specific

This, apparently, is the group of people who are going to realise they need a Falcon when they see what the software can do. This means that Atari are very much in the pockets of "serious" software houses - they have needed to ensure the software that's coming out is absolutely outstanding and really shows off the capabilities of the machine. It's only now that this software is available in any quantity. Again, collaborative ads are the order of the day - but where these ads are placed (and whether they actually exist yet) is a matter for debate. There is certainly a case for arguing they should be in rival format magazines - PC and Amiga mags, for example. Something that's important to consider here is the credibility that the Falcon has - since many of the smaller software houses tend to follow the lead of the larger ones, it's up to Atari to convince the bigger people that they are in this for real.



need or desire of a very specialised group of people. The takeup rate is likely to be highest here.

Finally there's the less defined "applications market."

So you know Atari think you need a Falcon and they have just this little bit of software

FALCON030: A LEAP FORWARD?

Atari's Falcon030 is a totally new machine, it's not a development of the STE or even the TT030, but a completely new design planned to be the forerunner of a whole family of Falcon computers.

The Falcon does, of course, retain a certain amount of compatibility with the older machines in the ST range. So much so that many programs designed for the Falcon030 happily run on the STE or STFM as long as none of the special hardware features of the Falcon are needed by the software.

So what makes the Falcon030 so much better than the STE? It's the new hardware capabilities that makes the Falcon a leap forward in computer technology. The Falcon is stuffed with hi-tech bits and pieces that were unheard of when either the STFM or the STE were designed, and many of these hardware features are only available on "professional" platforms as expensive extras.

Superior sound

Sound sampling is very popular on the ST using the AVR series of cartridges to create stereo and mono samples in 8-bit and 16-bit resolutions at sample rates up to CD quality 44.1KHz.

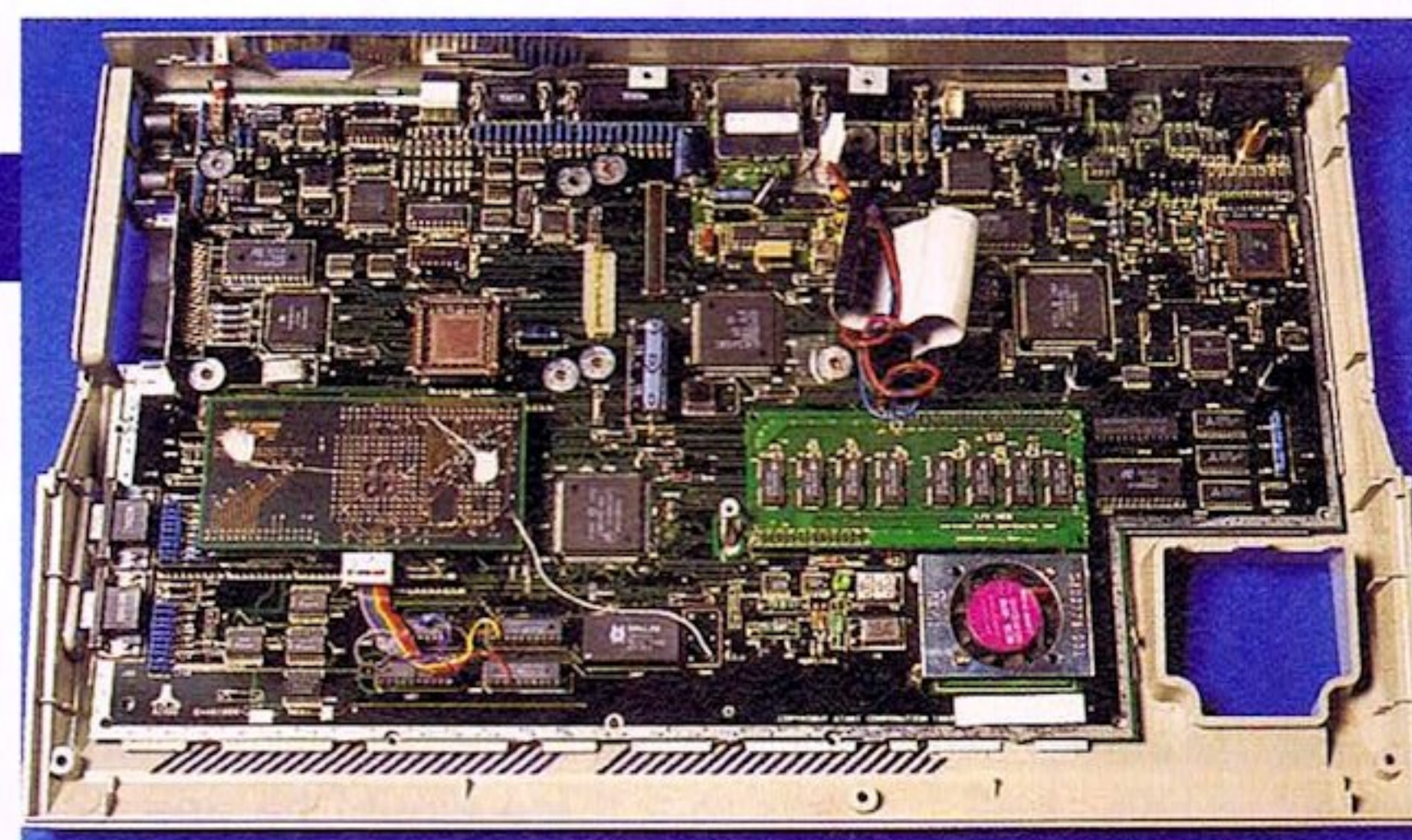
The Falcon doesn't need an external sampler cartridge to do this, it uses a special chip called the CODEC (enCOder-DECoder) to do the same job - the CODEC chip contains the 16-bit ADCs and DACs

in one unit. All you have to do is provide a stereo sound input to the microphone socket on the back of the Falcon and run your sampling software, you can now sample at up to 50KHz, greater than CD quality. This means that direct to hard drive recording and playback at 16-bit resolution is available as a standard feature of the machine, something no other computer available can do and a very important feature for the professional music business.

Another integral part of the Falcon's audio sub-system is the Motorola DSP 56001 Digital Signal Processor, a powerful co-processor designed to process digital information at high speeds enabling amazing audio and visual effects to be generated in real-time. The combination of the CODEC and the DSP, with direct access to the Falcon's DMA system, gives the machine the most powerful sound system available on any computer and it all comes as standard in the Falcon.

DSP expansion

The DSP can be used for more than just sound manipulation, it can process any type of digital data at very high speeds. The DSP port on the back of the



■ The Falcon - you're very unlikely to see a cleaner looking or better computer.

Falcon is a very high speed serial interface enabling modems, fax modems, colour hand and flat-bed scanners, laser printers, DAT recorders and audio expansions to be connected to the Falcon.

The DSP is so powerful that it can be used in conjunction with the CODEC chip for complex functions such as speech synthesis, voice

recognition systems, software modems and may even be used for graphics applications such as decompressing JPEG still graphic files and MPEG full motion video files. Indeed, some software developers have already written software that enables standard PC video files in MPEG format to be played on the Falcon.

Visually stunning



The STE has three screen resolutions - low, medium and high - enabling a maximum of 16 colours on-screen in low resolution and two colours in high resolution. Not very impressive.

The Falcon is much more versatile when it comes to screen resolutions and colours, with a maximum resolution of 768x480 pixels in overscan mode and a maximum of 65,536 colours on screen in true colour mode.

■ Another example of the type of images you can use on the Falcon, this is just one 256 colour GIF from over 1,200 available on a fantasy CD-ROM disc from 16/32 Systems.



that's precisely what you want. You're not going to be persuaded yet, are you? You want to know about upgrades, about support if anything goes wrong – and how committed Atari are precisely to this particular project. Is it just this year's scheme to give the press something to write about or are they serious? Find out, when you buy your machine from a dealer, who's responsible for repairs – and if you buy a machine that's been altered in any way from the way it was when Atari shipped it into the country you might find it's a more complicated story than just the sin-

gle supplier who gets to do the repairs. Atari need to make sure they have these systems in place and up and running efficiently before encouraging too many people to buy the machine.

Distribution networks

Right, you want a Falcon, you've got the cash and you're desperate to start using that nifty colour retouching program. But can you find a shop that stocks them? Can you hell. One of the main things that's ultimately going to affect the success or failure of the Falcon is whether you can buy one when you want to buy one. If you can't

you're not necessarily going to be waiting in suspense – you're going to buy something else that's there and available. Although Atari say they've not positioned the Falcon as "the A1200 basher" they must have lost a number of Falcon sales to the A1200 – even going from anecdotal evidence from letters to *STF*. Dealers need to know a lot about the machine to "sell" its qualities – they themselves have to believe in it – and in Atari.

Software availability

The more software that you can get for the machine the better – you just feel that the potential's there to do so much with it. Problem is that few software houses like to be alone in the market. The serious side of the industry is pretty small – but the more companies that take the plunge and make some money out of the machine, the more likely other companies are likely to be enticed into the market. On the games side of things, the smaller softies tend to take the lead of the bigger companies – Atari and the Falcon have to have some credibil-

ity before they're going to take the plunge – and that means selling a lot of machines. One point that David Link of Hisoft makes very well is the fact that before the software surrounding a particular machine has a chance of getting going, there need to be the programming languages available – "they're very important at the birth of a machine." Hence Hisoft's interest in the language side of things.

Politically and commercially, Atari have to convince a of people as far as the Falcon is concerned. The company has been busy with the development of launching the Jaguar and has got waylaid, but apparently the Tramiels are determined to remain in the computer market as well as the consoles – if they're convinced they really need to take the Falcon seriously. They need to ensure their after sales service is comparable to other platforms, they need to deliver what they say when they say.

There's no doubt, however, that the machine is a brilliant one. We take a look at the specs offered by it – as you can buy it now.



■ Hisoft are developing even more graphics software to complement True Paint, True Image is an image processing package.

Other advances

Not so obvious, but just as important, are the other hardware aspects of the Falcon. The main processor is a Motorola 68030 running at 16MHz, not very fast when compared to the speed of processors on other platforms. This is

more than made up for by the DSP56001 running at 32MHz, the DSP handles the bulk of any digital processing at very high speeds enabling the 68030 to get on with "normal" data processing.

Powerful features inherent in the 68030 are memory protection

and virtual memory capabilities. Memory protection enables multi-tasking operating systems – like Atari's own MultiTOS – to be used, so that more than one program can run at once sharing the main processor without one application causing the other program running

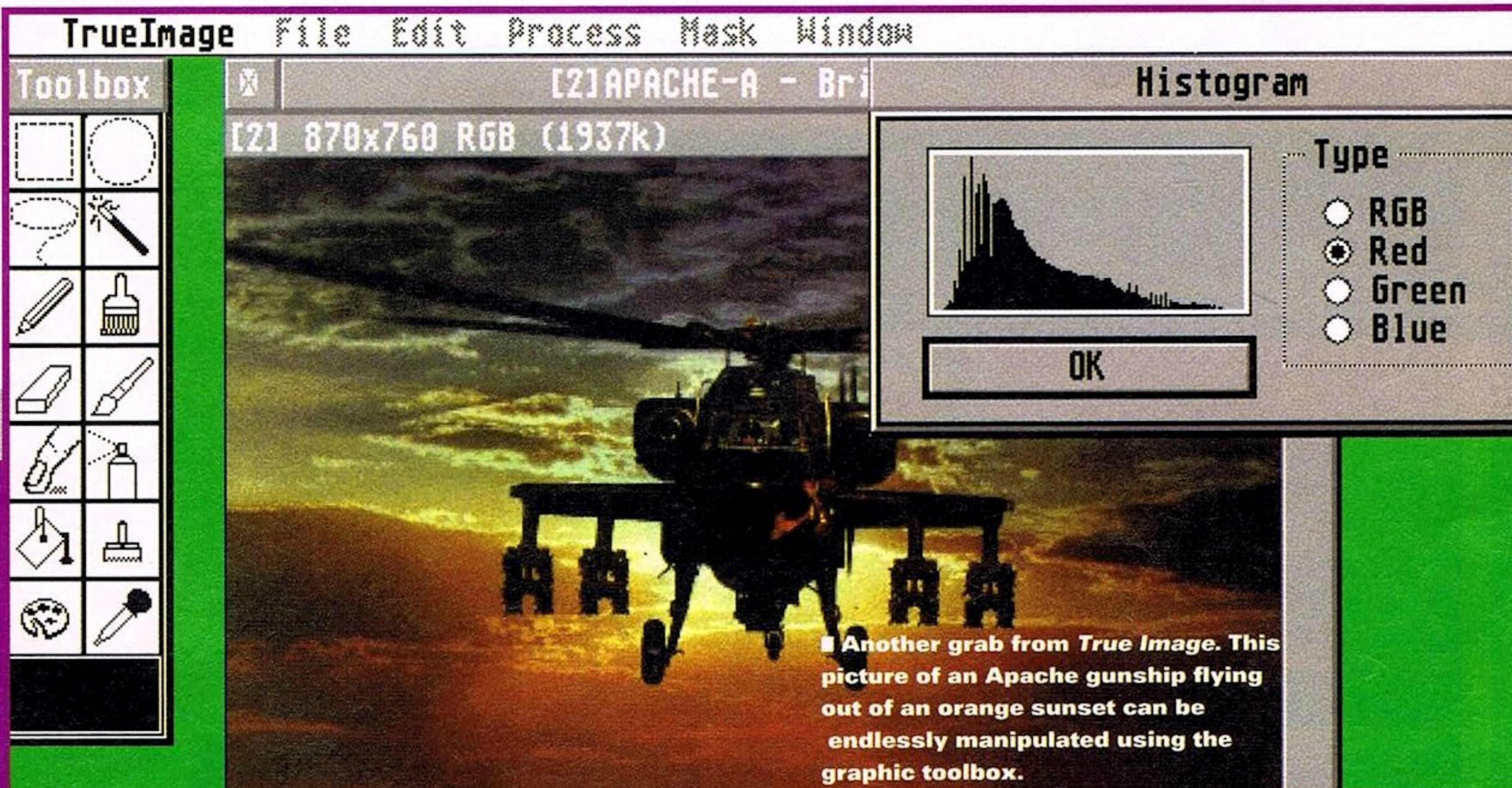
to crash. Virtual memory enables the Falcon to use the hard drive for memory storage, effectively increasing the memory size of the machine. If you have a 4MByte Falcon with a hard drive you can assign 12MBytes of the hard drive as virtual memory to give you a 14MByte machine, 2MBytes are taken up for system operations.

The Falcon has an internal hard drive and a large memory as standard, there's no point buying the 1MByte machine without a hard drive because you can't do much with it.

The hard drive enables larger, more powerful applications and games to be used with the machine – even so, it's very easy to quickly fill up an entire 80MByte hard drive with large picture files and sound samples.

The final and potentially the most important feature of the Falcon is the SCSI2 interface. This is a high speed parallel port enabling all SCSI and SCSI2 devices to be used with the Falcon. These include standard CD-ROM drives, Kodak Photo-CD drives, read-write optical drives, SCSI tape streamers and standard SCSI hard drives – opening up a vast range of mass storage and information devices.

The use of these high-speed storage devices combined with its sound and graphics enables the Falcon to realise its full potential as a true multi-media machine. **stf**



■ Another grab from True Image. This picture of an Apache gunship flying out of an orange sunset can be endlessly manipulated using the graphic toolbox.

The most useful screen mode for serious software such as DTP, word processing, music and most graphics applications is 640x480 pixels in 256 colours, the same resolution as VGA mode on the PC. The three standard ST screen modes are retained for "compatibility" rea-

sons, although most ST software fails at some point when run on the Falcon.

The real eye-opener is true colour mode, fantastic graphics and animations can be created and modified in real-time (using the DSP), enabling photo-realistic images to be viewed in up to

65,536 colours, albeit at a lower resolution. True colour mode is also ideal for graphics and photo-retouching software and turns the Falcon030 into a powerful professional graphics workstation. All this graphical power comes as a standard feature of the Falcon.

Atari ST
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Atari ST
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ST FORMAT 85%

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ST ACTION 90%

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THE SOFT TOUCH?

top quality. Remember, the Falcon is a relatively young machine, and programmers are still effectively in the teething stages of development – learning how best to handle the high resolution true colour graphics, use the 16-bit sound, and program the DSP chip effectively. We're now going to look at these capabilities, and find out just how well the programs match up to the potential of this powerful machine.

ART AND GRAPHICS

The standard Falcon can display images which, on an ST, normally require an expensive graphics card. Using a palette of up to 65,535 different colours, images of up to 768x480 pixels can be displayed, and the clarity and colour of those images have to be seen on-screen to be believed. Consequently, the possibilities for art and graphics packages on the Falcon are tremendous. Most Falcon graphics modes work using a normal RGB colour monitor, but if you want really high resolution you can buy a VGA compatible (PC) monitor.

The only Falcon paint package on sale at the moment is Hisoft/AVR's *True Paint* (reviewed STF 47, 82%). This is earmarked as the Falcon's answer to *Degas Elite* and *Neochrome*, because it offers all the basic range of functions you expect from a graphics program. No frills, and it runs pretty slowly when creating large images; but then on the plus side it works in all resolutions on the Falcon, TT and

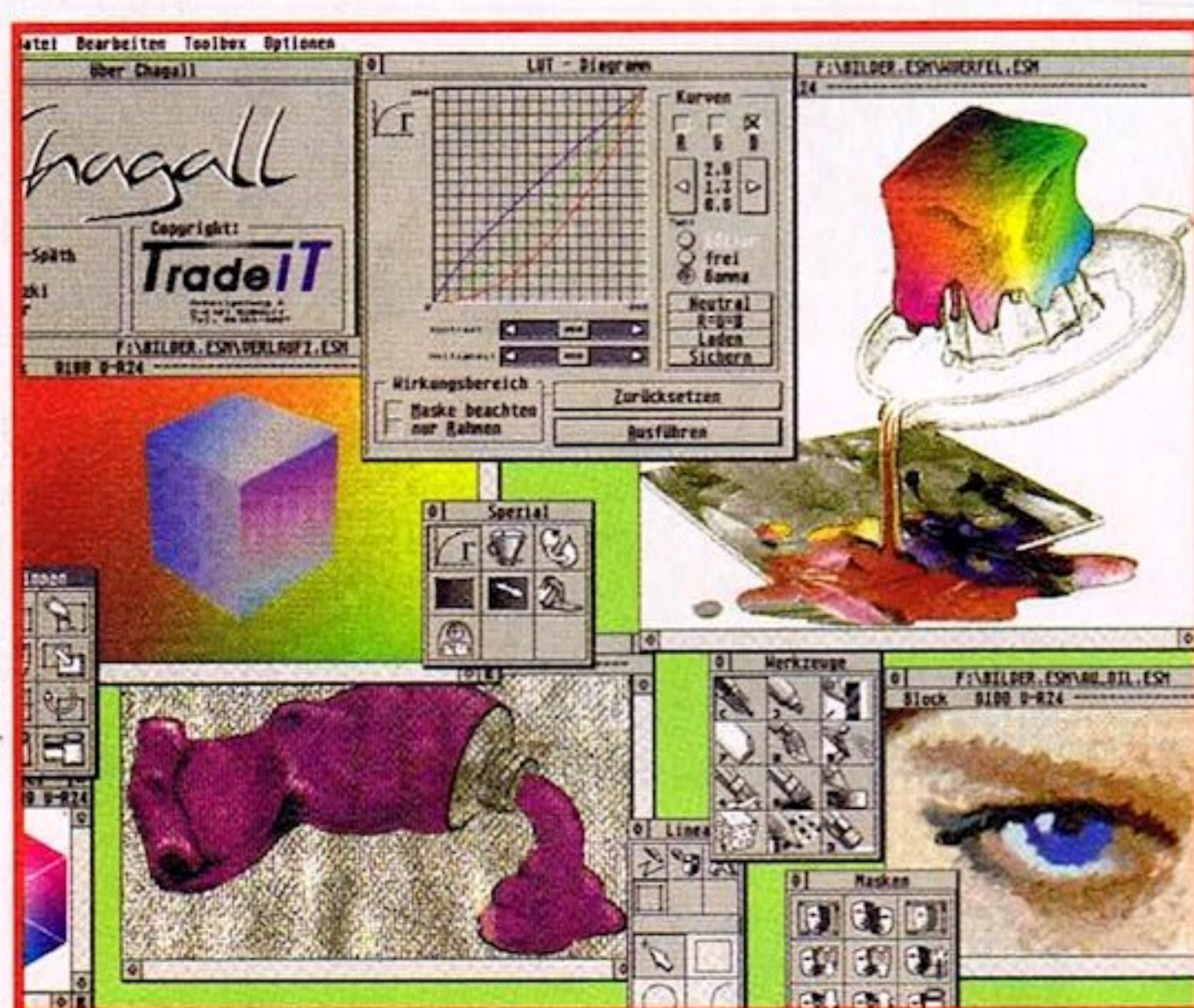


■ This picture was created with the wondrous *Xenomorph*. Just think what's possible with *Xenomorph 2*.

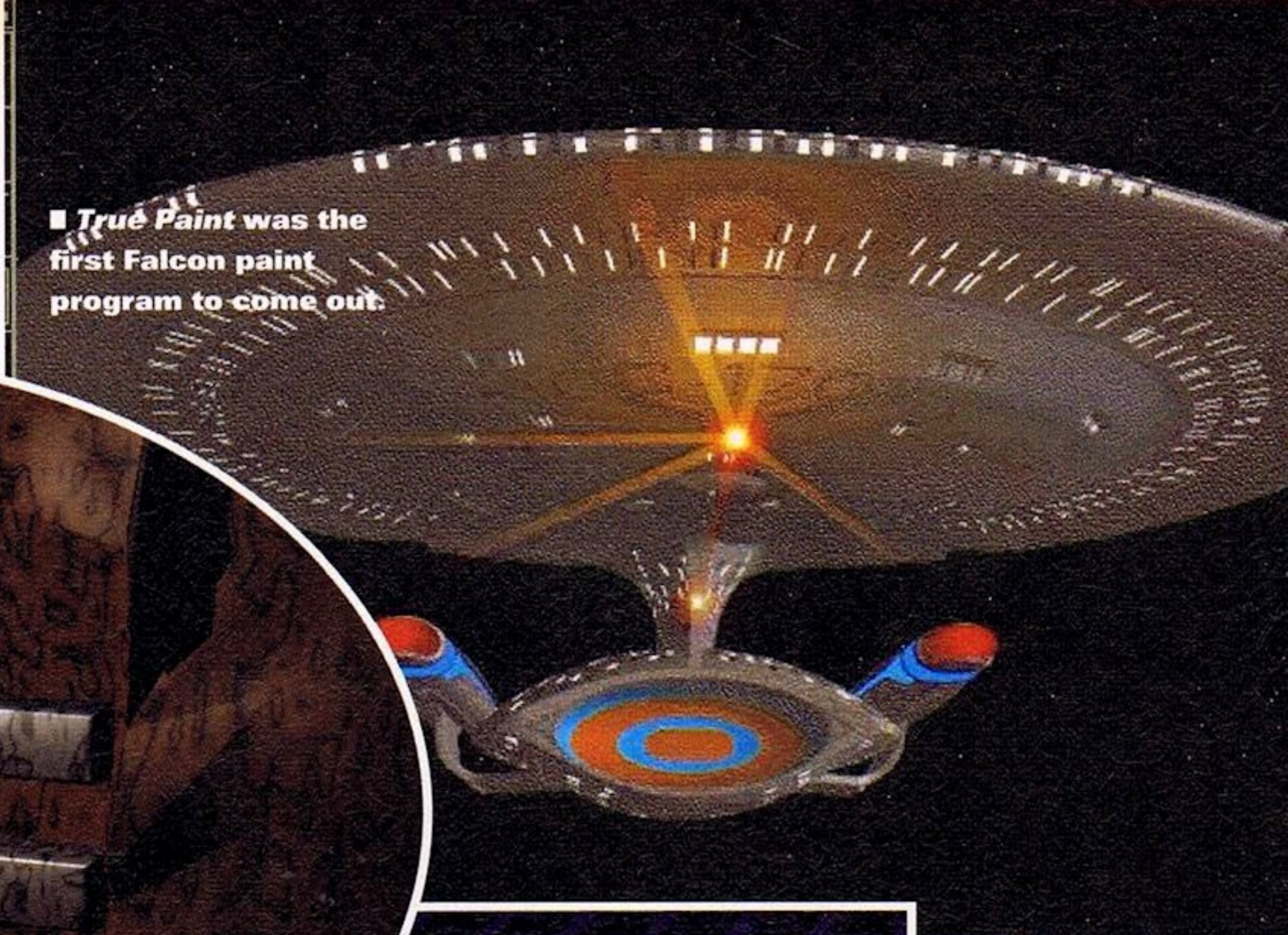
ST range, it saves and loads using Hisoft's EFMS (External File Management System) so it will be compatible with all future Hisoft Falcon graphics releases, and sets you back just 40 quid. Not bad.

Lexicor Software, the American-based company that's responsible for the graphics software running on Silicon Graphics Iris/Indigo workstations (such as those that created the morphing effects in *Terminator 2* and *The Abyss*) are responsible

■ *Chagall* gives you the chance to do things you'd never before considered. Oo-er.



■ *True Paint* was the first Falcon paint program to come out.



■ Investigate the possibilities of *Raystart* with our amazing Cover Disk demo this month.



for *Prism Paint 2*. Available soon from 16/32 Systems, this drawing package works in all Falcon resolutions, and up to true colour mode. There is also an animation package built in called *Artis Animator*, with a new animation file format which supports 24-bit graphic modes.

As well as drawing, another application for graphics on the Falcon is in image processing. An image processing package enables you to work on existing image files, and alter its components. For example, you can change the contrast and brightness, turn it into a grey-scale image, filter out all the colour except red, say, or blur or sharpen the image.

Before writing *True Image*, Hisoft/AVR's programmers looked

closely at one of the most popular image processors, Adobe's *Photoshop* running on the Apple Macintosh, and tried to make *True Image* as easy to use and powerful as that program. Like *True Paint*, *True Image* uses Hisoft's standard file management system EFMS, so images can be easily imported into both packages.

Studio Photo from Compo is another good example of an image processing package. Reviewed in *ST FORMAT* issue 52, it achieved a respectable 82% even though it's dogged by a poor manual and slow speed – for general image processing work, however, it's superb.

Lastly, and boasting some rather impressive features, there's *Chagall* from CGS Computerbild.

MULTIMEDIA/VIDEO

The Falcon doesn't only have stunning graphics capabilities, it also opens up many and varied possibilities for video and multimedia applications. The basic requirements for a computer to give good video, as it were, are a swift processor and a large colour palette, making the Falcon ideal for these applications.

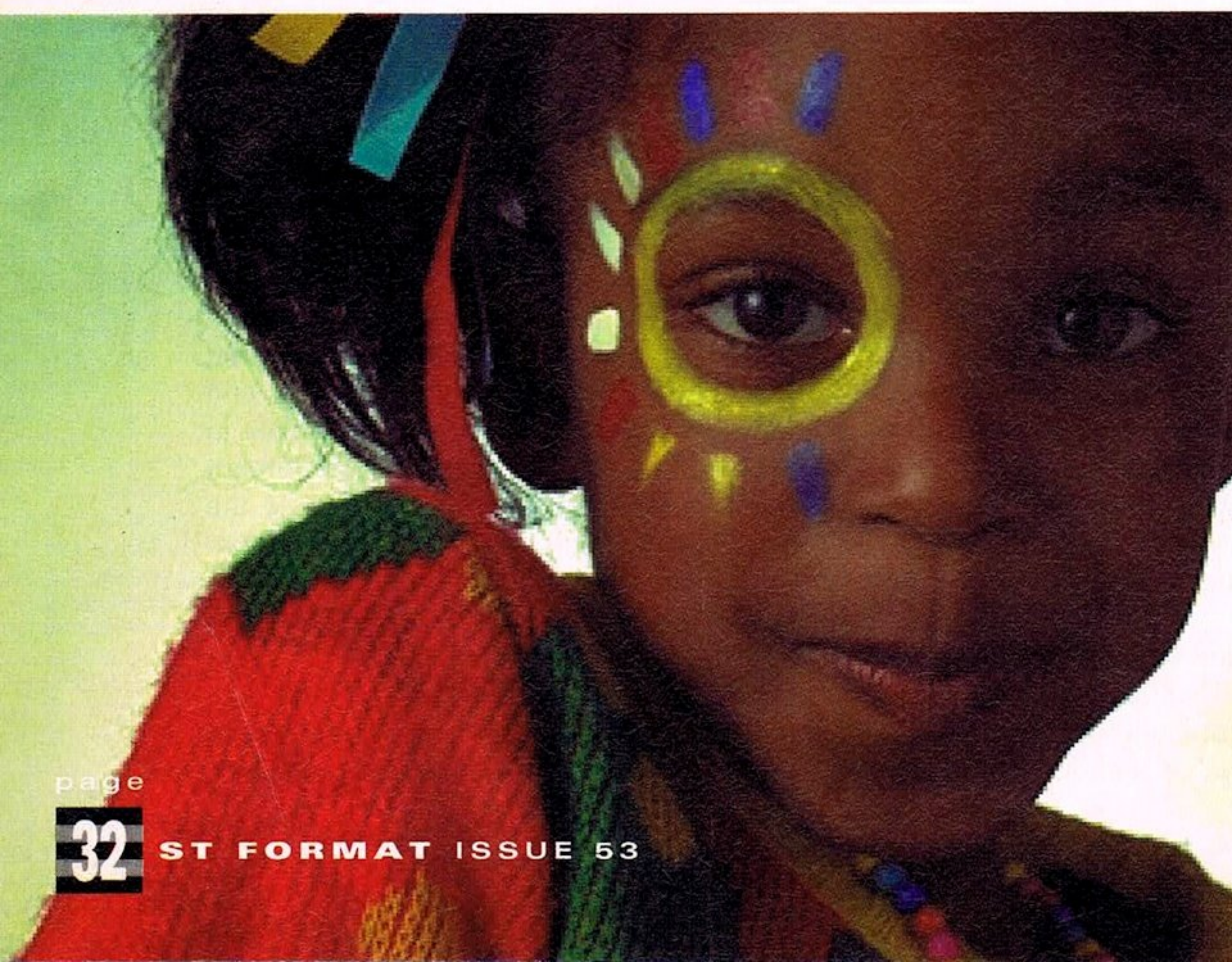
The Falcon is certainly capable of real-time digitising in monochrome, because Hisoft's Videomaster on the ST grabs real-time monochrome video at 25 frames per second. What we'd really like to see, though, is real-time colour digitising. Titan Designs' upcoming Exposé digitiser promises true

colour digitising at a respectable rate of ten frames per second, but although we've heard a lot about it, it is some way from completion.

However, Videomaster Falcon from Hisoft/AVR is capable of digitising single frames in high resolution true colour mode, giving amazing photographic-quality results. Also released, but not Falcon-specific, is an electronic RGB splitter which splits the composite signal from your video camera into separate red, green and blue signals that Videomaster uses to create a full colour image. We've reviewed both of these pieces of kit in this issue, so turn to page 38 for the complete lowdown.

The rather colourfully-titled *Overlay Hypermedia* from Compo is what's described as a video titler plus. As well as giving you the abil-

■ This picture is one of the demonstration pics from Kodak, showing you just what *Photo CD* can do. Excellent.

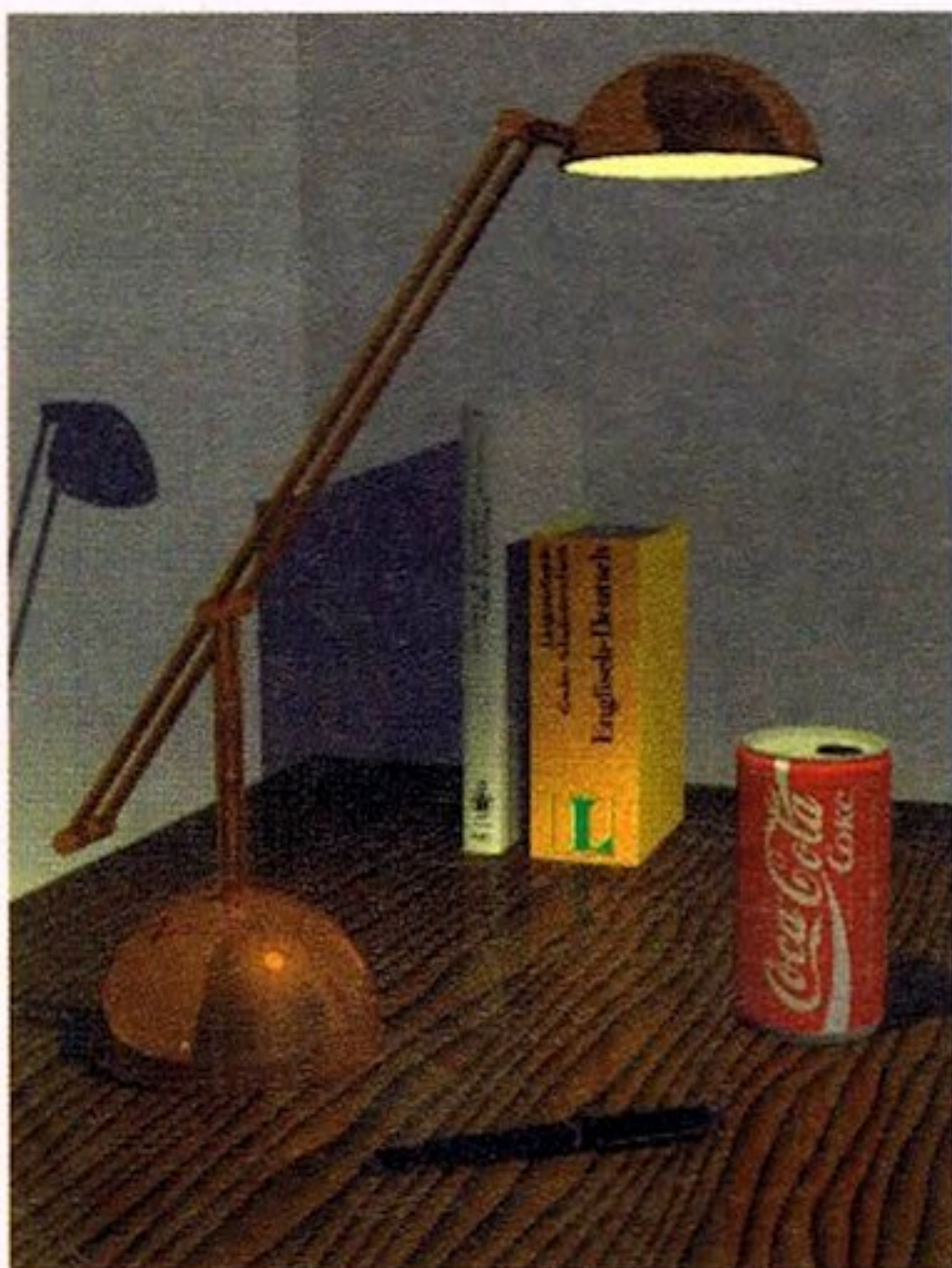




■ Use *Studio Photo* from Compo to mess about with brilliantly coloured images like this one.

It's a normal image processing package, just like those described above, but its speciality is in producing images which don't appear to be computer generated. Many tools are included to create a real-world look, like airbrushes, oil paints and water-colours, for images up to true colour.

The Falcon is going to be particularly strong in raytracing and morphing. Raytracing is a mathematical process which is used to create realistic looking objects on your Falcon screen; while morph-



ing, or polymorphic tweening, is a technique for creating animations where one image is transformed smoothly into another.

There are three raytracing packages soon to be released for the Falcon. The first is *RayStart* from 16/32 Systems, you should be familiar with this already since there's a demo on the Cover Disk of this very issue. Read the blurb on the Cover Disk pages and run the demo for the best information about the software, but suffice to say that it's a capable raytracing program, and can create images in all resolutions. *RayStart* should be released within the next couple of months, and is likely to set you back by a reasonable £89.

Xenomorph 2, also from 16/32, is another program from those clever Lexicor chappies. *Xenomorph* was good, but the new version promises much more: running under MultiTOS you can render images in the background, for a start. New features include enhanced shadows and silhou-

■ *InShape* from CGS packs the power - and your Falcon needs to too, with a maths coprocessor.

ettes, more textures, colour splines and Gouraud/Phong shading.

The third package to be released soon is *InShape* from CGS ComputerBild. This is a little different to the first two, in that it requires a maths co-processor to be fitted to your Falcon before you

"Xenomorph was good but the new version promises much more"

can even attempt to render any images. This suggests that *InShape* is an extremely powerful program, and its excellent specifications - including many natural textures such as clouds - back this up. As always, the *ST FORMAT* review tells you exactly what you need to know - make sure you look out for it in the next couple of issues.

So that leaves morphing, then. The ST has never seen a morphing package, except for the odd program from the PD, so it comes

as no surprise to find there's only one program which supports morphing on the Falcon (so far, anyway.) *Chronos 3D* from 16/32 is a fully-featured modelling animation package, which creates animations using wire-frame techniques and then renders them using an amazing variety of modelling tools. Among the animation techniques listed is morphing - so we're looking forward to reviewing the package! It should appear in the next couple of months.

When you're seriously into graphics on the Falcon, you tend to find that certain image file formats can't be used by all art packages. This is where a file format converter can be useful, they take the data from one file type and convert it into another format.

Some converters are available from PD libraries, but Compo are shortly to release *Studio Convert* which promises to be the Rolls-Royce of all the graphics converters, and should be fairly cheap too. Virtually every file format is to be covered, including recent types such as *Photo CD* and JPEG, as well as the classics such as IMG and *Spectrum 512*.

ity to add titles onto your videos in a variety of styles and colours, you can also integrate it with sound so it's possible to trigger graphics and titles in time with sound effects.

The Falcon's Photo CD compatibility is raising some interest among developers as well, with many programs recognising Kodak's PCD image file format already. *Photo*

Show from System Solutions uses Photo CD to create presentations, displaying the images and playing sampled soundtracks simultaneously. You list all the pictures you

want to show, make up the soundtrack from single samples, and you can then control it all with loops and repeats - just like using a music sequencer.



■ The Falcon enables you to explore the possibilities of video much more thoroughly than your ST ever could. *Videomaster Falcon* helps you along the way.

BUSINESS/PRODUCTIVITY

As with music, the ST has always been one of the best computers to buy for business-type applications such as word processors, DTP packages, spreadsheets and databases. The reason for this is that handling data and number-crunching is one of the ST's strengths, and the Falcon is likely to continue that tradition with some excellent packages.

The first of these has most types of business programs in one integrated package, and, although it originates with Atari US, Hisoft are doing the British conversion, manuals and distribution. Called *Atari Works*, it comprises a spreadsheet, database, word processor, paint package and communications software, so it's basically a jack-of-all-trades, but it's cheap so who's complaining? A

more professional word processor comes from Hisoft. *Papyrus* is what's known as a "document processor," a sort of cross between a desktop publishing package and a word processor. It sports some excellent features including an automatic table of contents and index generator. It also supports SpeedoGDOS outline fonts, which isn't surprising because they're also made by Hisoft...

That's Write 3 from Compo is the latest version of the document processor which received a pretty stunning 90% in issue 45 of *ST FORMAT*. Although it works perfectly well on the ST, Compo promise that it "wakes up" when it's on the Falcon, using all the new screen modes and giving you colour dialog boxes.

MUSIC

The ST is the popular choice for professional musicians; its built-in MIDI ports and high resolution screen display is ideal for running sequencers and other music software. The Falcon also has these attributes, but it has other features which enable it to be used for many other musical applications.

For example, the fast processor speed and separate DSP (Digital Signal Processor) chip not only makes 16-bit CD-quality sampling possible, but also direct to hard disk recording. Such features are normally only available on expensive dedicated music gear, so the Falcon's basic requirement of a software program to control the sampling and hard disk control puts it way ahead of any competition. If you're wondering why anyone wants to sample to hard disk, think how much memory sampling uses up, then think of how much room you have on a hard disk. Suddenly recording and mixing a song (or even an entire album, if you have the odd Gigabyte hard

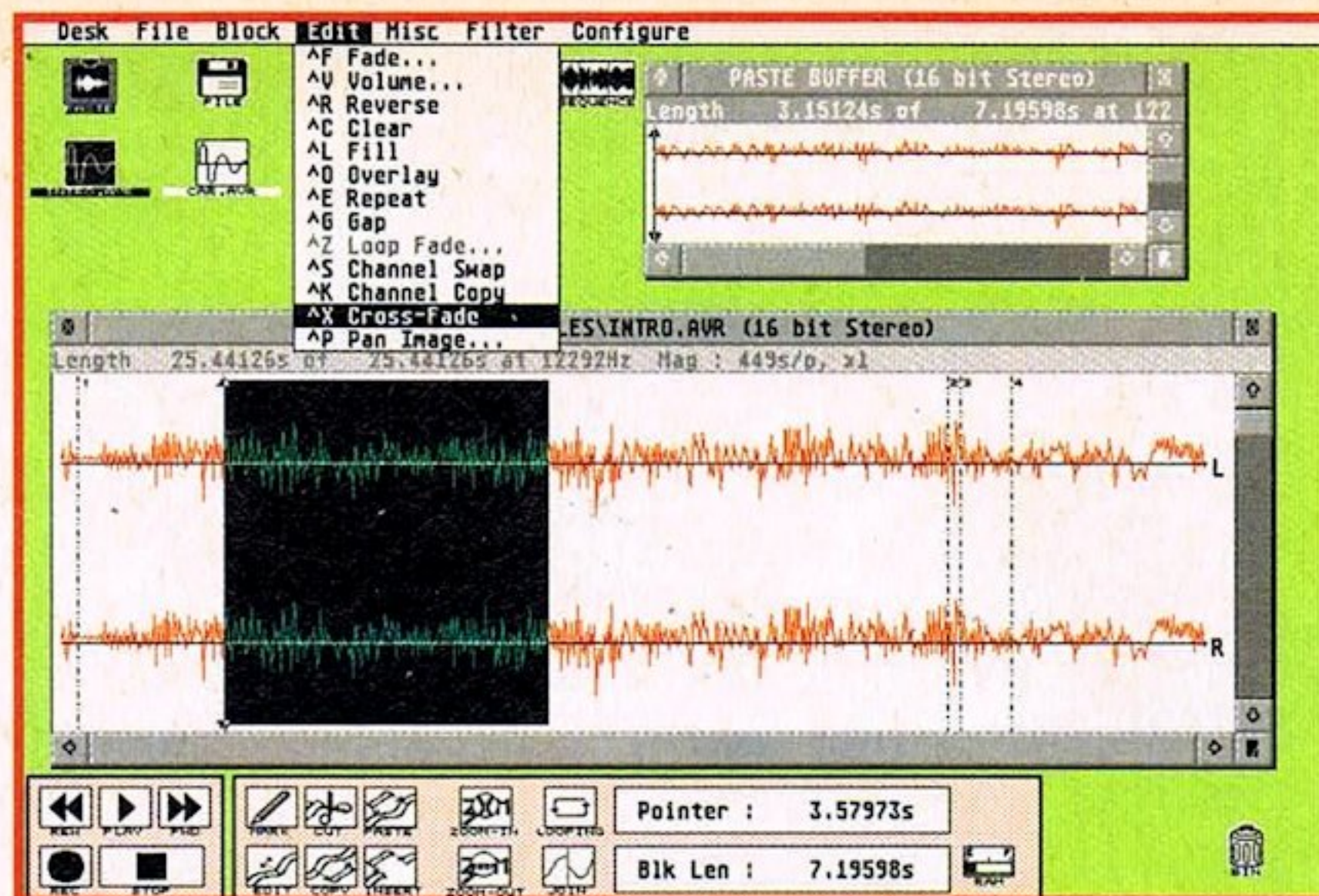
drive floating around) digitally sounds rather plausible...

Compo produced the first direct-to-disk recorder; *Musicom* costs just £49.95, but works better than the price would suggest. Reviewed in *STF* 47 (78%), *Musicom* is more aimed at the amateur musician who is more into larking

"The Falcon has other features which enable it to be used for many other musical applications"

about than laying down serious tracks, with its karaoke mode and DSP real-time effects. *Musicom 2*, adds sample editing features along with a modular interface so you have only the functions you want open.

4T/FX from D2D Systems was originally intended for inclusion with every Falcon purchased. Now available for £299, which is still reasonable given the cost of dedicated



■ **Clarity** is the Falcon's answer to the brilliant sound sampler *Replay 16*. Definitely worth a look if you're mad about music.

systems, 4T/FX is a full four-track digital recorder, sampling music and sound effects at up to 50KHz – better than CD quality.

This may soon face some stiff competition in the form of *Clarity* from Hisoft/AVR. If you have used Hisoft's *Replay 16* mono sound sampler on the ST, you know that *Clarity* is worth watching out for. *Replay 16* is a superb quality sampler with excellent editing software – similar programs come with the fully stereo *Clarity*, which supports direct to hard disk recording. The package also includes hardware enabling sampling frequencies of 44.1 and 48KHz, making the system compatible with both CD and DAT media, and a line-in input so you

don't have to use the Falcon's built-in microphone socket for your sound source.

Digitape from CGS also supports direct to disk recording, and sports digital sound processing features such as reverb, flanger, frequency analyser and, of course, the obligatory karaoke module...

Heavyweight sequencer manufacturers Harman are producing an updated version of its *Cubase* sequencer for the Falcon, called *Cubase Audio*, which boasts eight track direct to disk recording as well as powerful MIDI sequencing. Main competitors EMagic are also creating a version of *Notator* – *Notator Audio* – for the Falcon, if you prefer their way of working.

UTILITIES

The most useful program you can have running on your Falcon is Hisoft's MultiTOS.

This is an operating system which replaces TOS, and enables more than one program to be run side by side – multi-tasking, in other words. Examined in *STF* 49, MultiTOS comes with all Falcons. It works pretty well with many programs, although there is lots of software which isn't compatible – so it's a good job that the latest version of TOS is also supplied.

Harlekin 3 from Hisoft is a bunch of useful utilities stored as a single Desk Accessory. 15 different programs are included, including a calculator, comms program and a RAMdisk; and it's MultiTOS friendly with a new multi-window editor.

The maximum free space on a floppy disk of 880K can be pretty limiting, because quite often single files – especially graphic images – can be over 1MByte in size. Hisoft's *Datalite 2* creates a special disk format, and uses an efficient compression technique which can safely increase the available space on a disk by up to 50%. You don't have to manually compress each file, *Datalite* does it all for you automatically, and the increase in access time of the data is negligible. It also works with hard disks.

Lastly: if you've ever telephoned a large company, but the person you wish to speak to is

"away from their desk," you may have been connected to their voice mail system. This is an electronic answering machine, which stores messages on a hard drive, and, depending on the time of day, plays the corresponding message.

Compo are making a similar system for the Falcon – called *Voicemail*, strangely enough. It includes dial-tone recognition, so

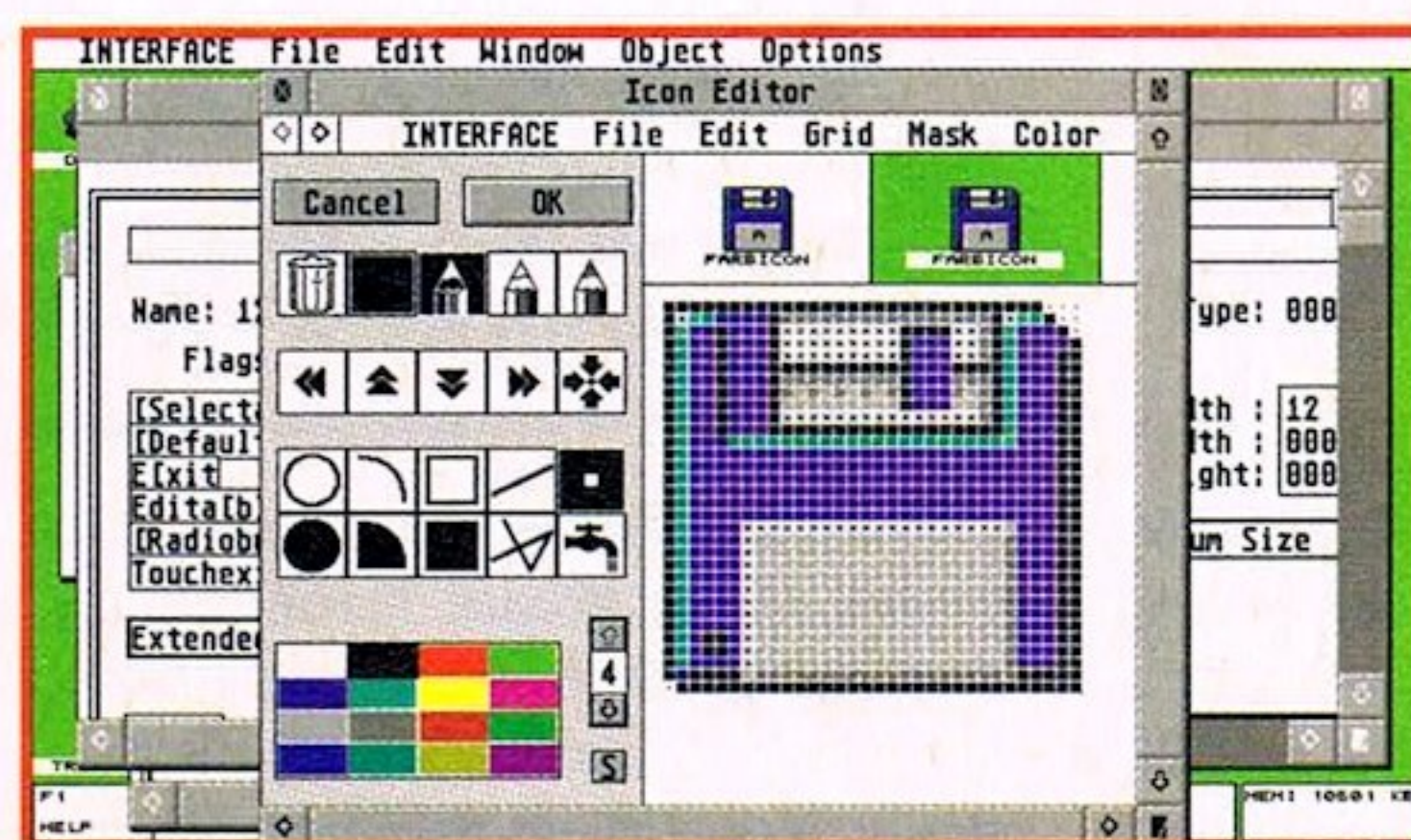
you can use your message to ask the caller to press different buttons to access phones in a network. The package includes control software with a small piece of hardware which plugs in via the LAN port.

For programmers using the GEM interface, Hisoft have come up with a set of utilities which enable you to create some natty drop down menus, windows and coloured icons. Called *Interface 2*, its full description is an "Advanced Resource Construction Set."

If you find GEM a little slow now and

again, that's because most of the code was written in C. System Solutions have the, ahem, solution with *NVDI 2.5*, reviewed in *ST FORMAT* issue 51 (85%). It's a small piece of software which replaces some of the GEM code with new fast machine code routines, speeding up normal GEM operations by up to ten times.

Even with a large amount of memory built into your Falcon, you'll be amazed at how quickly it gets used up when you're playing about with true colour images or 16-bit stereo samples. 16/32 Systems have the answer to that problem with a virtual memory manager called *Outside*. This handy utility sets up part of your hard drive as RAM, which most programs can use as normal memory – just what you need!



■ **Make that user interface friendly in your programs with Hisoft's Interface 2.**

PROGRAMMING

What would any of us be doing without programming languages? The ST and Falcon would have no software, *ST FORMAT* would never have been born, we would all have jobs down the docks and... oh no, there would be no *Rainbow Islands*!

Programming languages are obviously very important to the success of any machine, so it's good to see that the Falcon has a brace of strong packages lined up to give it every chance in life. Hisoft have a bit of a monopoly in this area so far, but that's not surprising because they have taken their most successful ST programs and made them take advantage of the Falcon's power.

Devpac 3 is probably the most widely used, standalone assembler on the ST. The Falcon version has extended capabilities, which includes a debug-

ger working with all Falcon resolutions. An additional package called *Devpac DSP* is available, which is a multi-window assembler and debugger enabling code to be assembled to control the Falcon's DSP chip.

There's a new version of Hisoft's *Lattice C* available if you prefer structured languages. Again, *Lattice C* (or *SAS C*) is a major upgrade for the Falcon, with extra tools such as a profiler and a version of *Make*, a renowned Unix utility.

Novices (or if you're just a programming dabbler) are catered for as well, with Hisoft's *Basic*. This is a fully-featured version of the BASIC language, including an extra GEM toolbox which can be used to create good-looking dialog boxes with keyboard shortcuts, all from within the language.

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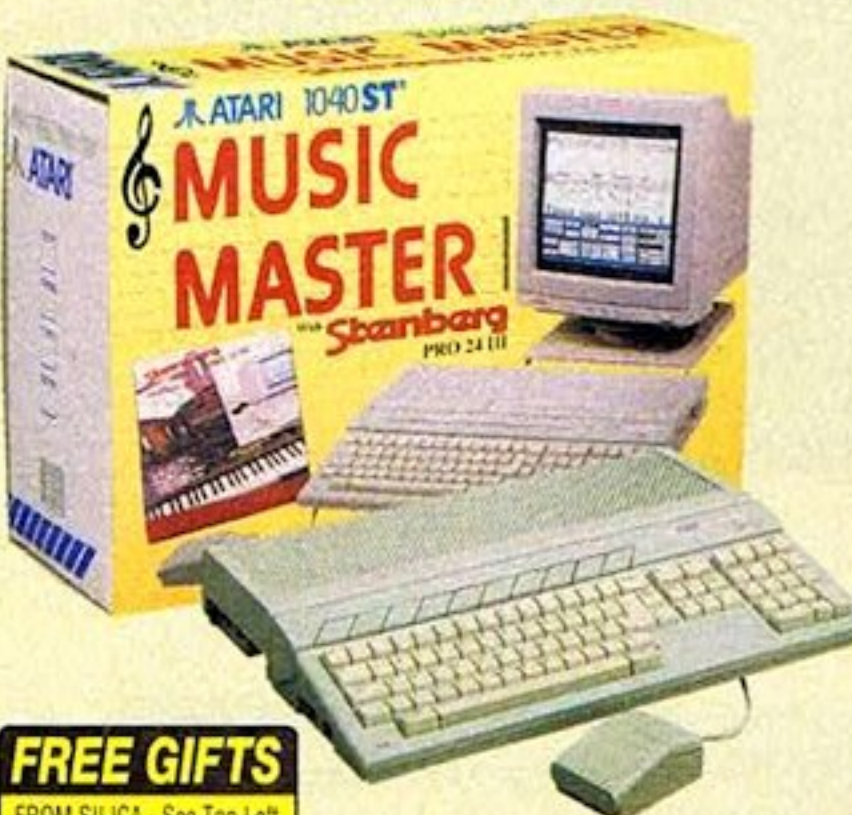
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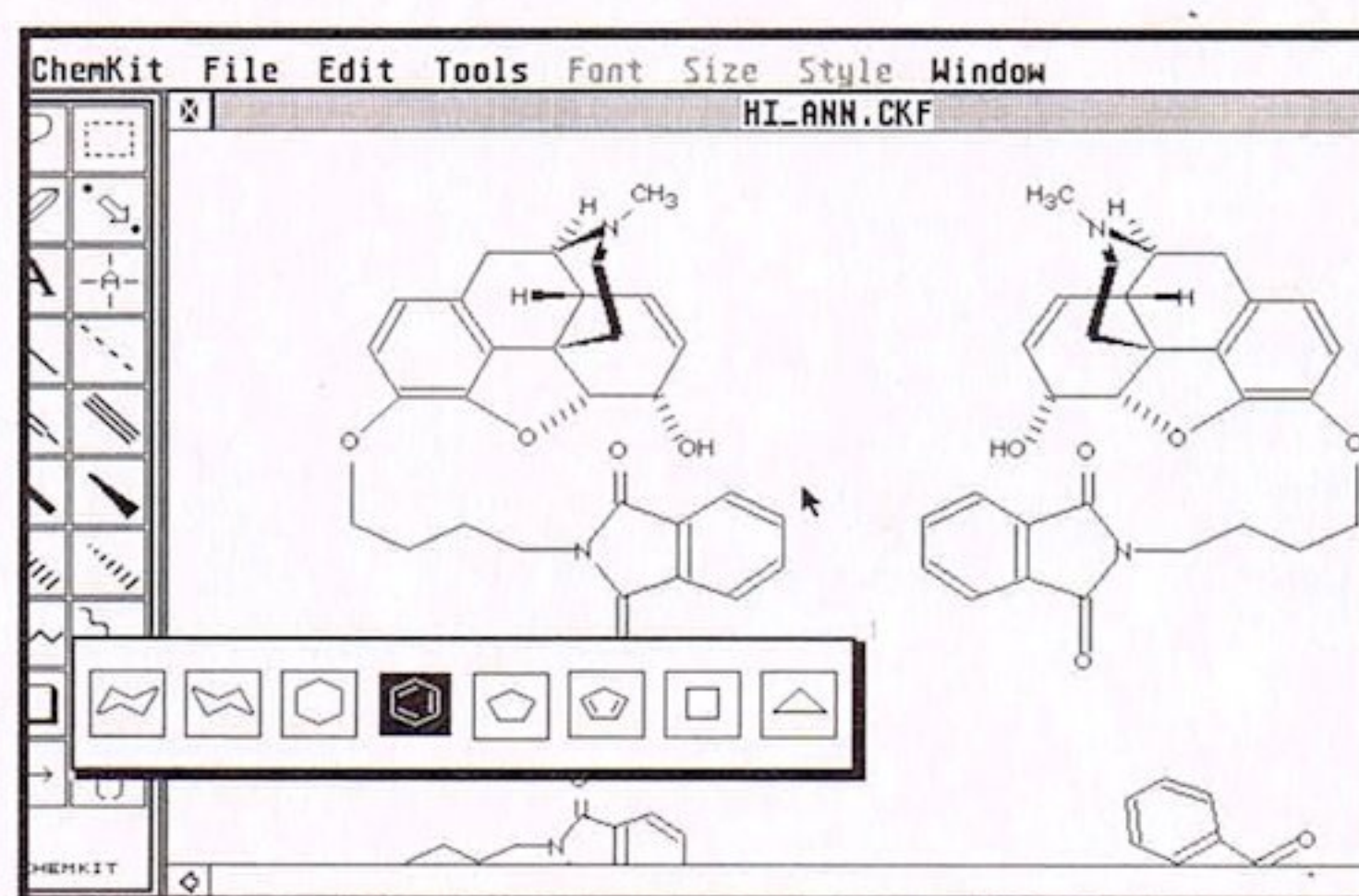
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CHEMKIT V1.5

A chemist's dream, this is a scientific desktop publishing application. As the name implies, the *Chemist's Construction Kit* is aimed at a particular market, namely those working with or studying chemistry.

ChemKit uses GDOS for its text functions and is supplied with a standard setup using the original GDOS and two font families, Swiss and Dutch. The program runs fine with any version of GDOS, including the new SpeedoGDOS vector font system. Installing *ChemKit* is done for you via a separate program, and the



■ *ChemKit's* main editing screen, complete with the icon toolbox. Some drawing functions also produce extra pop-up toolboxes so you can choose object types.

entire system runs comfortably from a single floppy, from a humble 520 right up to the Falcon.

ChemKit isn't a full DTP package at all, and is most likely to be of use in conjunction with a DTP system. The idea behind *ChemKit* is to enable the easy production of scientific diagrams, which you can use in another program. Drawings can be exported as GEM vector images, or IMG and P13 bitmaps, so your finished work can be used from any DTP package or word processor. Printouts from within

ChemKit are handled by GDOS drivers, producing acceptable output even on the cheapest 9-pin printer.

ChemKit works by choosing predefined atoms or objects from the icon toolbox, and placing them on the screen with the mouse. A good selection of object types are

available, and placing them on the diagram is extremely simple. Atoms can be joined via different methods, including single, double, approaching or receding bonds. The bonds themselves can be a set length, or defined by dragging the mouse. Atoms can be labelled, and text can easily be added wherever you need it. Sections of the drawing can be edited and moved about very easily by either cutting and pasting, or using the "Atom Mover," and you can easily make changes.

The program comes supplied with three Accessories: Masscalc calculates the relative molecular mass for any formula, while the Periodic Table displays information for any chosen

element from the table. A simple digital/analog clock is also provided. The whole program works well, and could be a boon to you if you're involved with scientific subjects.

FRANK CHARLTON

Chemkit version 1.5

£39.95 Hisoft/AVR

☎ 0525 718181

Hard drive installable

High res only

Highs

■ Easy to install and use, powerful editing functions, fills a specialised niche.

Lows

■ Screen update can be slow.

What else?

■ *MOLSYS*, Caledonia PDL Disk SC1 – molecular modeller, not quite as flexible as *ChemKit*.

■ *MOLGRAPH*, £19.95 ST Club – powerful package aimed at molecular modelling rather than producing working diagrams.

STEADY
86
STATE

APL 68000

APL is the amazingly imaginative title for A Programming Language – yes, really. In fact, it's one of the oldest computer languages around, having been developed in the early '60s by Ken Iverson.

At first sight, APL looks daunting, largely because of all the symbols that are used in its instructions. This belies the fact that APL is very easy to learn, and once you've grasped the basics, writing programs in APL is probably quicker than with any other language. As such, it is well suited to any application that you need to set up quickly, and is especially useful for creating programs that have to be constantly altered.

The core of APL is called a workspace. The workspace can be filled with routines and data. These are given a name and can be accessed in any order by typing their name. One of the most powerful and easy-to-use features of APL is its data manipulation. For this reason it has found a welcome home in financial and scientific work, although its potential doesn't end with number-crunching. APL automatically determines the type of data variable used; there's no need to specify whether it

■ **Multiplying tables of numbers.** Nothing could be easier with APL.

is to be a whole number or a string of text, and tables of numbers can also be assigned to just a single variable name – adding two tables together is simply a case of adding their two names together, so it's easy and logical.

Micro.APL is a very professional implementation of the APL language. It runs in a GEM environment, with up to four workspaces open at once, each with its own window. Micro APL can even multi-task, running up to four workspaces simultaneously, which, since APL is often used to manipulate large tables of data, can save a considerable amount of time. If you've ever had to recalculate a large spreadsheet you can appreciate this.

It has full GEM support, enabling you to include menus, windows and all those useful VDI functions – pie graphs, bar charts – in your workspaces. While setting up a dialog box may not be as polished as

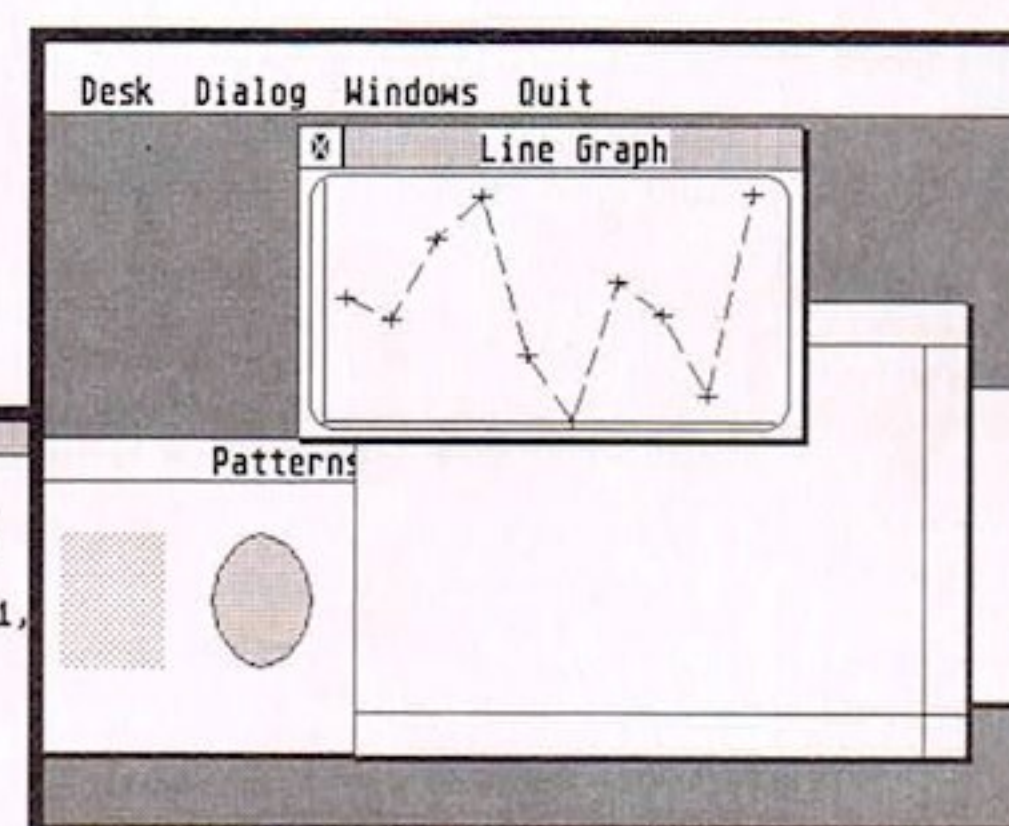
APL 68000/1

APL 68000 LEVEL II COPYRIGHT (C) 1990 MICROAPL LTD.
MS SIZE=1532K, VERSION = 2.05/H

SALES	
3	4
13	15
12	23
23	21

PRICE	
1.5	1.5
1.6	1.8
2.1	2.2

SALES * PRICE	
19.5	22.5
19.2	41.4
48.3	46.2



■ Micro APL has full GEM support, graphs and tables to illustrate your figures can be produced quickly and easily.

Verdict

Micro APL is a very powerful, easy to use, package. If you're interested in trying out APL, you might probably find the price a little prohibitive. It's very impressive and you find it can cope with anything you throw at it

TONY WAGSTAFF

APL 68000

Level 1 £110.75

Level 2 £228.25

Micro APL ☎ 071 922 8866

Highs

■ Very powerful, easy to use.

Lows

■ Expensive, manuals could be clearer.

What else?

■ *I-APL/ST*, £11 from 11 Auburn Rd, Redland, Bristol BS6 6LS

STEADY
90
STATE



CP-GEN

A simple patch editor and librarian program for all your synths? Andy Curtis checks it out...

It sounds too good to be true, one program that handles every single MIDI synth, module or even effects unit on the market. CP-GEN works by enabling you to create control panels that are customised to the needs of your synth. Each control panel has a maximum of ten pages, each page being a full screen. The start of the process is more like DTP than music, devices have to be pasted on to the page and organised logically and neatly. You need to study the way in which your synth edits sounds in order to build up a meaningful format.

There are many devices to choose from in the drop-down menu. Simply click on a device and a parameters box pops up, hit <Return> to install the device on the page. Double-clicking on the device re-opens the parameters box and you can then edit the MIDI messages you wish to send to the synth. By careful planning you can build up a page which enables you to set up and edit a sound in your synth far more easily than using the front panel of the unit.

To use CP-GEN to the full you need access to the MIDI Implementation Chart at the back of your synth's manual. This is where all the system exclusive data is displayed. These codes (usually in hex) are used by the program to talk directly to the synth of your choice. No other synth obeys command codes for another synth, hence the name "system exclusive." For example, you may wish to alter the VFO on a sound, select a "slider" from the devices menu and label it "VFO." Double-click on the device to open the parameters box and enter in

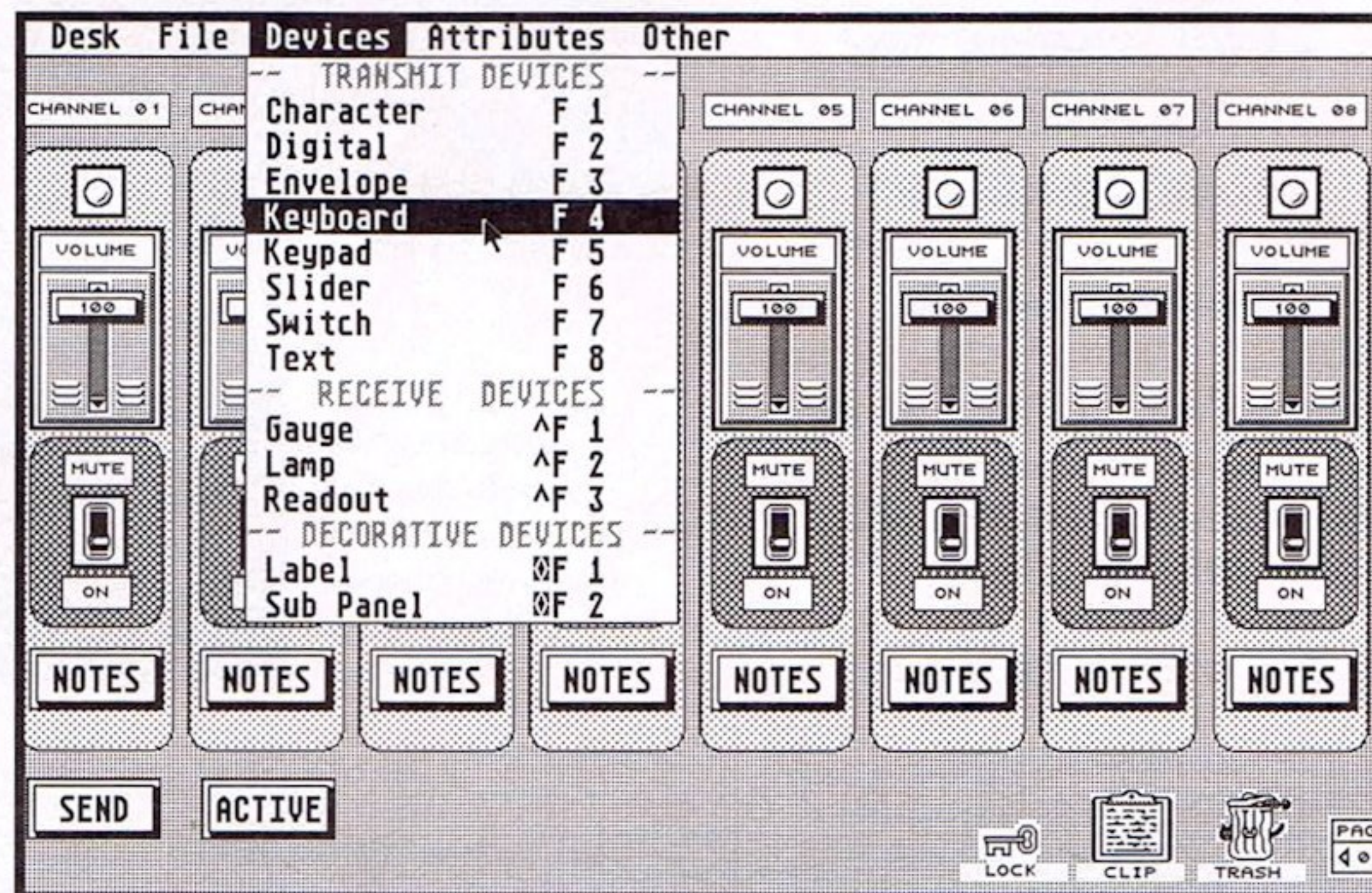
the SyEx code for VFO manipulation. Now, when you move this slider it alters the VFO of the selected sound on your synth.

By repeating this rather complex process you can build up a sophisticated control panel for each of your synths. The end results work effectively and look very impressive. If you're already thinking that this sounds too technical for you, then fear not. The author of the program intends to make a wide variety of control panels available through the Public Domain. The chances are that your synth is covered and that, as the program catches on, certain propeller headed individuals supply panels for the less common synths.

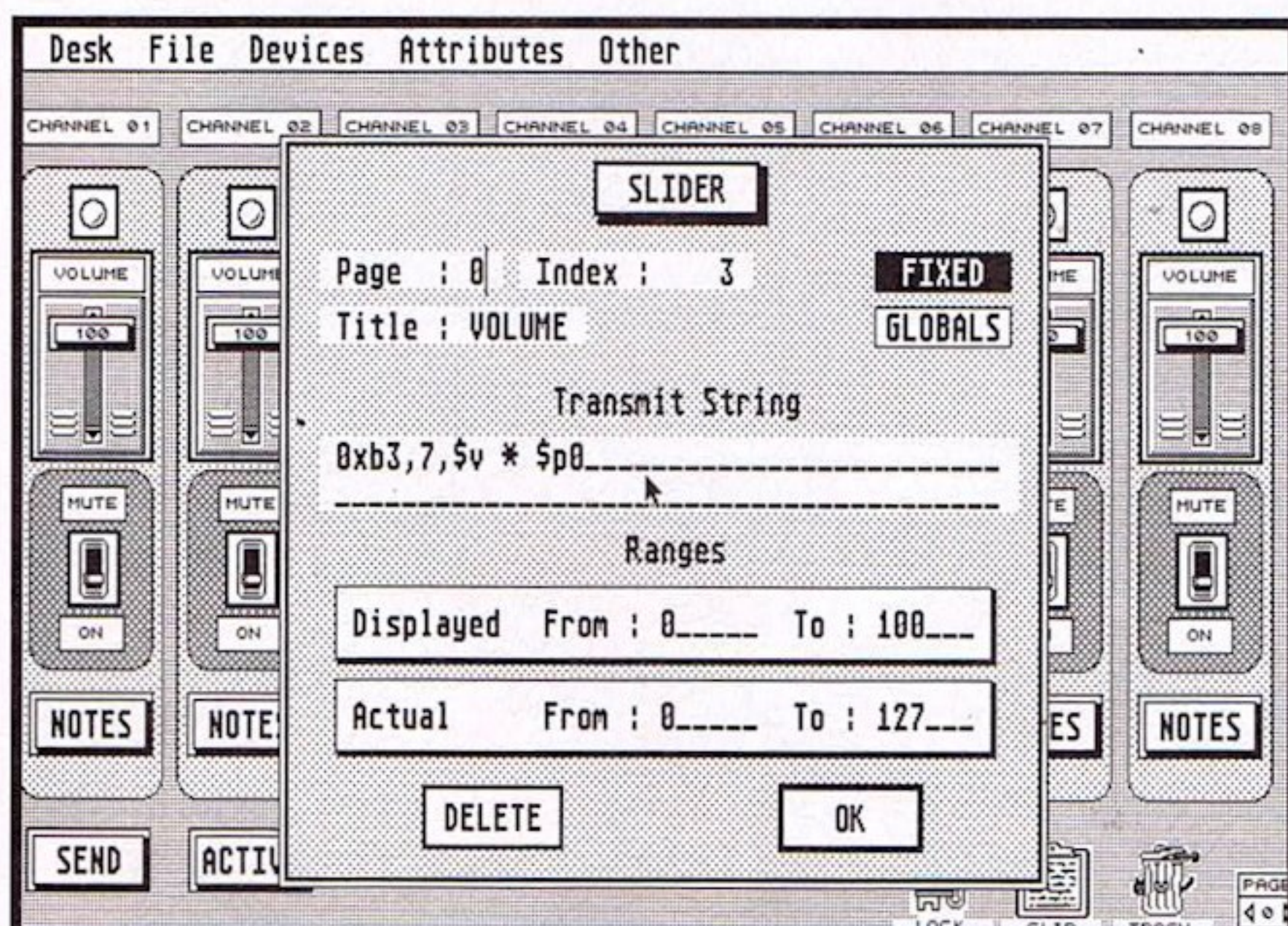
One word of warning, CP-GEN is a little fussy about which Desk

Accessories it runs alongside. We found it was best to remove all ACC files before running the program. When you've got it running, try your Desk Accessories one by one to find out what is safe and what isn't.

CP-GEN comes professionally packed and with two program disks. The second disk contains example files and isn't essential to the running of the program. The main disk contains the important part and it is write-protected. While you can copy the files on it to another disk or to a hard drive partition, the "key" disk must remain in your internal floppy drive ready to be interrogated by the program. Simply click on the program file and the fun begins.



■ Choose devices from this drop-down menu, paste them onto the page and you soon build up useful MIDI controllers, like this elegant MIDI mixer.



■ If you double-click on any device on the page, a dialog box similar to this springs up. Edit the fields carefully in order to attain the desired control of your synth. The MIDI implementation chart at the back of your synth manual is indispensable.

Verdict

The success of this program lies in the degree of software support for it. If there are a great many synths supported in the PD then its future is bright. The cost price of the package is justified with the savings on specific editors for each synth you own. There is also a distinct advantage in working with a similar interface for each synth.

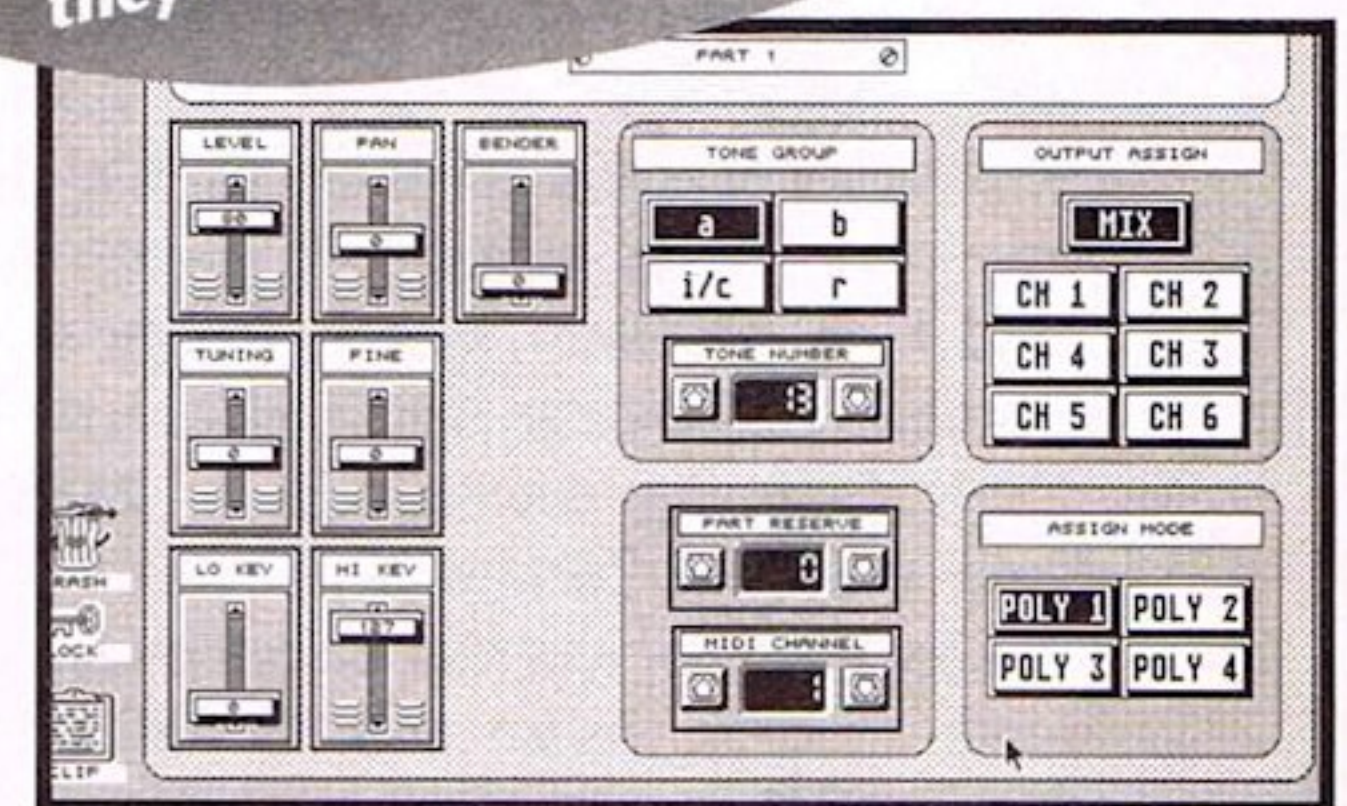
The key disk protection is a pain, but probably a necessary pain and one well worth putting up with if it guarantees continued development and support for the program.

If you're technically minded you can compile your own panels and, hopefully, put them into the Public Domain as well, so this program could be a useful money saver in the long run. **stf**



■ Here comes CP-GEN to revolutionise the way you control your synths. With some careful editing you can soon make complete sound editors for all your favourite sound machines. Using CP-GEN saves you a lot of dosh too because you never need to buy another Synth Editor package.

TRY IT FOR THREE QUID!
There is a limited version of CP-GEN available, called CP-LITE. You can get hold of a copy by sending £3 to GRI-Soft to the address below. If you buy the full version they knock your £3 off the price.



■ With the correct System Exclusive commands entered, you can exercise complete control over the sound generators in your synth. No need to screw your eyes up looking at some poorly lit LCD display. CP-GEN is pleasant to look at and it all works beautifully too.

CP-GEN

£79.95 GRI-Soft
☎ 0494 443266
PO Box 488, High Wycombe, Bucks, HP13 5FJ
All STs, mono only.

Highs

■ Open ended format, panels in PD, beautiful graphics.

Lows

■ Key disk protection, technically demanding, doesn't run with many Accessories.

Competition

■ CP-GEN is one of a kind, so there is no comparison.

82%
SFT
RATING



■ The main editing screen in Videomaster. The digitiser screen is on the left, displayed in 256 colours, and the audio sample window is below it.

NEW AGE



Hang on, where's Andy Nuttall gone? He was here a minute ago. Oh, hang on, isn't that him over there hassling that old granny with a video camera? The sooner we send *Videomaster Falcon* back, the better...

Little L-shaped boxes of tricks are rarely as well received as *Videomaster* was when it first came out. It was one of only two video digitisers that were available on the ST, but it stood a long way out from its competition because of its brilliant high-quality grabs, and the fact that it digitised audio as well as video – simultaneously.

That original *Videomaster* works just fine on the Falcon, but it doesn't take advantage of any of the machine's features such as its high resolution mode, true colour graphics and high processor speed. The new version, *Videomaster Falcon*, does just that. Grabbing animations in 256 grey shades at 30 frames per second is now possible, whereas before it was only 16 grey shades and 25 frames per second.

More importantly, still frames can be grabbed in high resolution true colour mode, giving perfect photo-quality grabs. And, of course, an audio track can be sampled at the

same time, using the Falcon's built-in 16-bit sampling capabilities.

Single-image digitising

To digitise an image using *Videomaster* you need to use a composite video signal as a source. Most video recorders and video cameras have

"Grabbing animations in 256 grey shades at 30 frames per second is now possible"

composite outputs – they are generally phono sockets marked by a yellow band – so check that yours has got one before you start.

Let's get one thing straight: *Videomaster* is a monochrome digi-

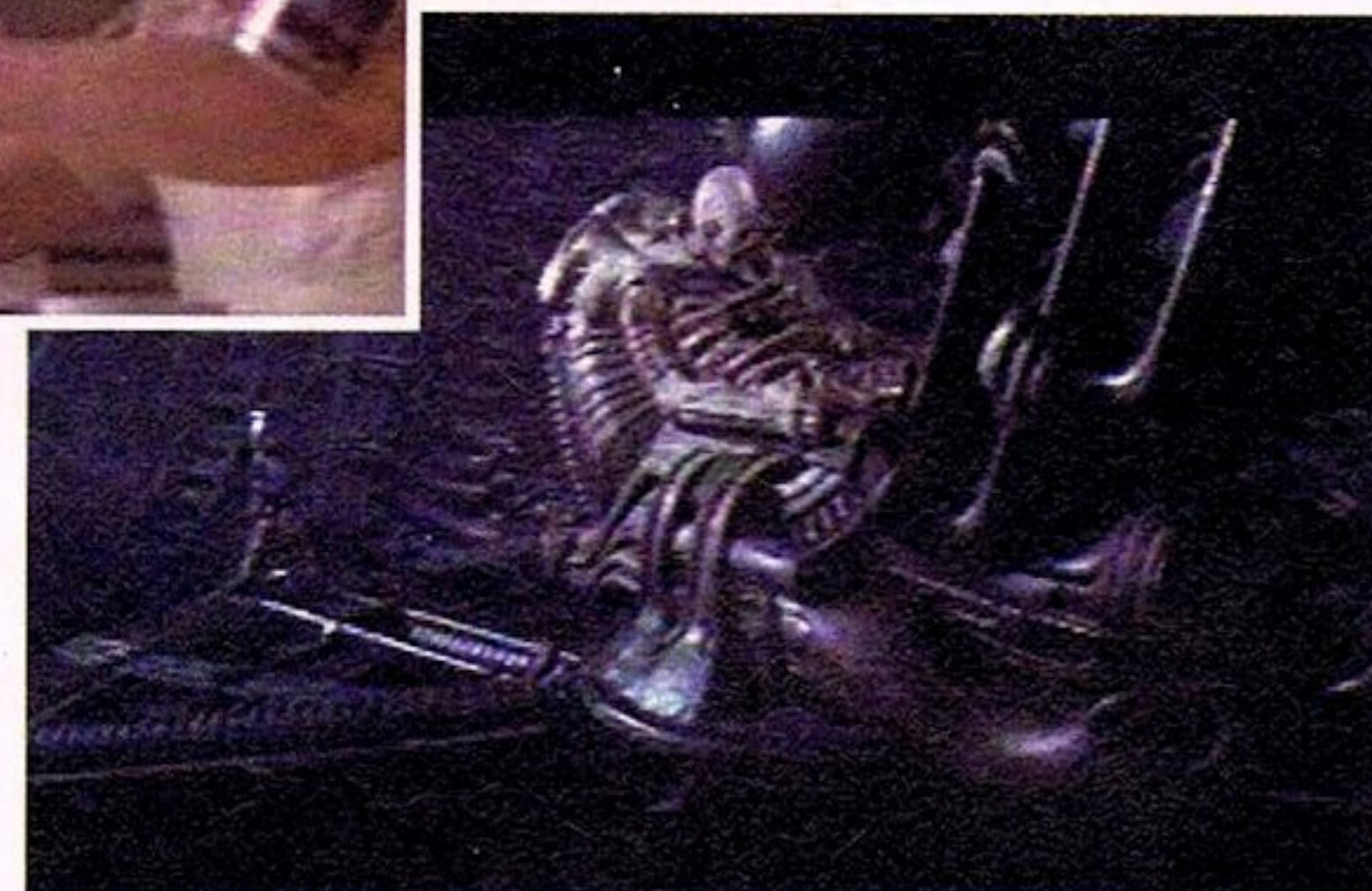
tiser. Hisoft say that the Falcon is definitely capable of real-time colour digitising, and they have the preliminary designs for the necessary hardware. But they're waiting to find the demand for the device before going ahead with it – and hence the update on the existing technology for *Videomaster*.



■ Even in low resolution, the results in true colour mode can be quite stunning.

master. Grabbing a single image is easy: simply click one button to watch what's coming through the video input, then when you want to grab, click the mouse button. This applies both for high resolution and low resolution modes, but obviously high resolution takes more time. You

■ To grab in high res, you really need a good freeze-frame control on your video. This was digitised by Hisoft from a professional video deck.



RGB COLOUR SPLITTER

In the bottom of the Videomaster box you find three pieces of film in tasteful red, green and blue. These are filters for use with a standard video camera to create colour grabs when using the digitiser

The *Videomaster* hardware is monochrome, which means that it only grabs images with 256 grey scales. However, the software has a colour option, where it accepts three separate monochrome grabs corresponding to the red, green and blue colour components, which it then mixes to create a colour

image. The cheapest way to get these three separate grabs is to hold the corresponding colour filter in front of the camera you're using to grab your image – this procedure is a bit "Heath Robinson," but it certainly works.

Because this is a bit fiddly, Hisoft/AVR have produced an electronic device to split a video signal into the three components. Plugged into both the *Videomaster* cartridge and the Falcon's joystick port, it integrates with the digitiser to quickly grab each red, green and blue image, producing pin-sharp results.

■ RGB Colour Splitter

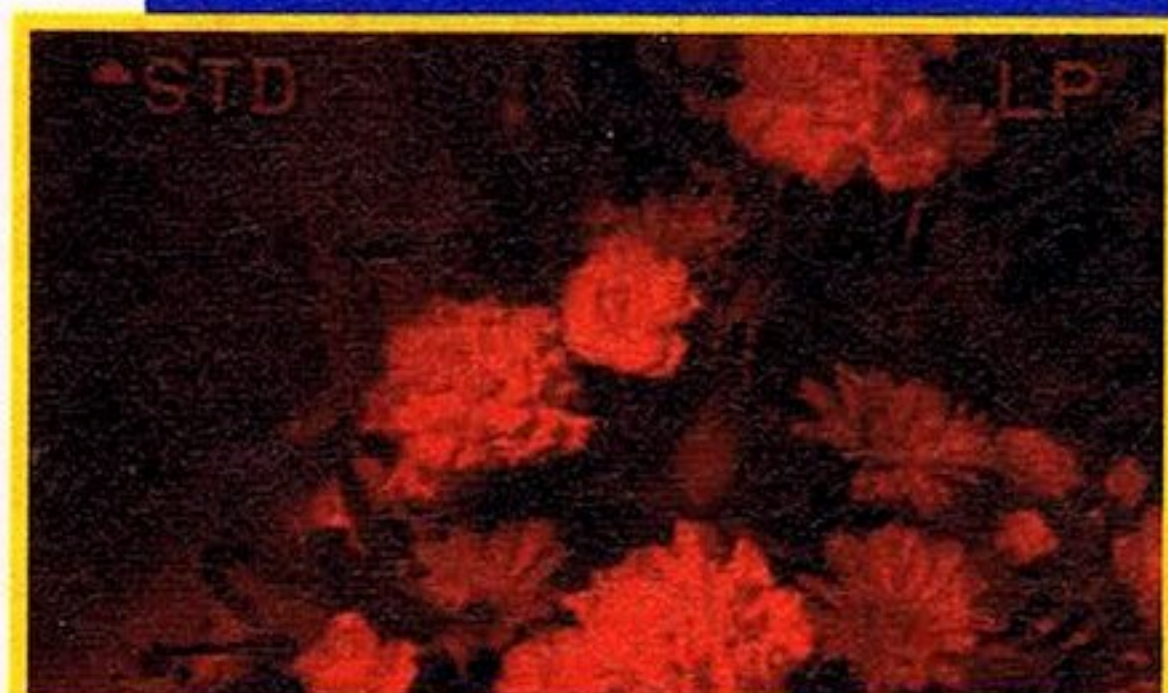
£79.95 Hisoft AVR
☎ 0525 718181

Highs

Integrates well with *Videomaster*. Excellent results. Cheapest around.

Lows

Plugs into three different ports, which can be a bit fiddly.



■ To create a full-colour image, you first grab the red component...



■ ...then mix in a delicately-balanced proportion of green component...



■ ...and finally a quick splat of blue component. Mix 'em up, and...



■ ...Voilà! A result. Adjust colour, brightness and contrast to taste.

OF VIDEO

can happily digitise at 30 frames per second in high resolution mode, which to your eye is almost real-time.

Easy animations

Possibly *Videomaster's* best feature is its ability to grab animations quickly and easily, and the intuitive method of editing the animation once you have recorded it. The video signal is displayed on the screen – only a quarter-screen size, admittedly – and you can set the software up to digitise the signal at a rate of up to 30 frames per second. This isn't broadcast quality by any means, but when it's used carefully you can achieve some very good results.

The editing software for the animation is pretty comprehensive. Separate frames from an animation can be singled out and saved to disk, and

"Videomaster is quite capable of sampling and digitising simultaneously"

imported into other animations which you have already saved. This makes stop-frame animation not only possible, but downright simple – so you can mess around with bits of Plasticine and possibly become the next Tony Hart or Nick Park! (Or maybe not...) A new feature on *Videomaster Falcon* is time lapse digitising, which enables you to set up your video camera to grab a single frame at every specified time interval,

say ten minutes, or something. You can then leave it to grab images over a period of time, which is very useful for security purposes (closed-circuit TV); or recording the progress of something which moves very slowly, such as a flower opening or a snail crawling. Pretty much a novelty feature, really, but great fun.

Oh yes, length. *Videomaster* takes advantage of every bit of memory you've got, splitting the available RAM up between its video and audio parts. Even if you've got a 14MByte Falcon, *Videomaster* can fill up every last byte of that, giving you a possibility of several minutes of animation, complete with a full audio soundtrack, all stored in memory! This does tend to use the memory of your hard disk up somewhat quickly, though, but think of the possibilities...

Sound and vision

Videomaster gives you 16-bit stereo audio sampling, at a fixed frequency of 16KHz. Not bad for a video digitiser, really. The 16KHz area is just about right for most applications, but don't expect anything near CD-quality. A lead is provided with *Videomaster* which connects into the microphone port on your Falcon, and gives you two line-in phono sockets to connect to your video camera, CD player or other sound source.

"Ah, but you can only sample sounds or digitise video images, then," you say. Not so. *Videomaster* is quite capable of sampling and digitising



■ The time-lapse animation option can produce some interesting results - especially when the subject doesn't know she's being filmed.

ing simultaneously, operating in a similar way to a video recorder (a black and white one, of course.) You can configure your memory to use a certain amount for audio and the rest for video. But once you start using *Videomaster* seriously – using both audio and video together – even with a 14MByte Falcon you're going to use up that memory pretty quickly! To give you some idea of what to expect, you can digitise around 50 frames of monochrome video per MByte of memory; and you can sample around 20 seconds of 16-bit stereo audio with the same MByte.

As an aside – digitising at ten frames per second gives fairly jerky results; but if you record audio simultaneously it makes the results seem smoother. This is because your ears fill in the bits in between each frame. Bizarre, but it works – and audio uses less memory than video...

Verdict

Brilliant. Great fun to use, especially with a video camera, and when you want to do something more serious, the system handles it incredibly well. In high resolution true colour, well, the results on this page speak for themselves – it is superb. Switch on the audio as well, and it becomes a mini video recorder with excellent editing facilities. 30 frames per second is still far from ideal, though, especially with only a quarter of the screen used. But if you're into producing demos, dubbing sound over video, or just getting a feel for digitising, *Videomaster's* unbeatable. **stf**

■ And here's one we prepared earlier. High res, true colour, taken using an ordinary video camera balanced on a pile of books. Good, eh? Just shows, if you use some vaguely professional gear, the sky's the limit - Videomaster grows with you.



Videomaster Falcon

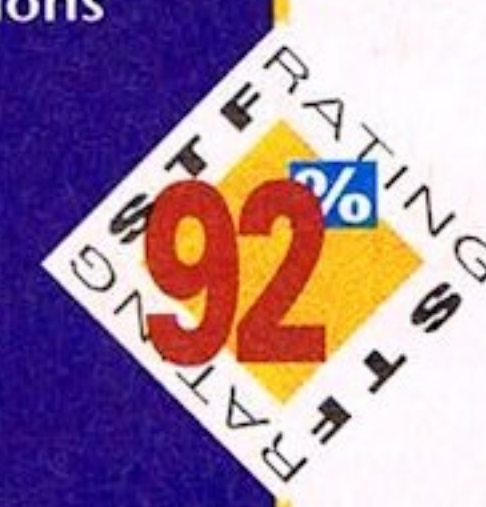
£129.95 Hisoft/AVR
0525 718181
Falcon030 only, hard drive installable

Highs

- The best digitising package around.
- Great for producing animations and demos.
- Good price.

Lows

- Still only monochrome at heart...
- ...And mono sampling, too...
- ...But we can't have everything.



MUSIC MON

With so many chip music sequencers jostling for position in the PD, is there really room for a commercial offering?

Even though *Music Mon ST* has been around for a couple of years it's only just been translated from German into English. The package comes in a neat A5 ring binder and all the program files are contained on one disk. Surprisingly, for a program of this kind, both colour and monochrome versions are included. This, together with its frugal memory usage, means that *Music Mon* is one of those rare programs which runs comfortably on absolutely any ST setup.

Music can be input via the computer keyboard or by means of a MIDI keyboard. Simply select one of the three channels, load in a sound to one of the 49 slots and start playing. Music can be input and edited in

step-time as well as real-time. Real-time means that you play the piece with the sequencer running in strict time with the metronome, whereas step-time means that you have to stop the sequencer to select the notes and put them into the arrangement by hand.

If you're a serious musician, you may prefer to attempt real-time recordings but watch out for the slight keyboard delay in *Music Mon*, you have to play slightly ahead of the beat to get your notes down correctly. The pattern edit feature enables you to process data to be processed in a variety of ways, the most useful of these enables you to transpose whole patterns or tracks. Just imagine having to do each note



beware, however, as the Desktop often corrupts when you quit from *Music Mon*. If you do use TOS 2 you are advised to re-boot after using the program, bearing in mind that *Music Mon* was written quite a while before TOS 2 was available.

The manual is poorly translated, but fairly easy to follow with a large section at the back devoted to source code listings. Just read it carefully and you shouldn't have any trouble getting started.

Sound editing

The Sound Edit page is great fun. Pick on any sound you have loaded or create a new one from scratch. Choose from a wide selection of highly technical parameters then click at random and listen to the result. After a short time you see how each function affects the sound. The arpeggio section is particularly enjoyable to use,

you can assign three different pitches to a note giving a spread chord effect, this really helps to fill out the sound of chip music pieces – use the effect liberally. It's a shame that so-called "Digi-Drums" can't be imported and used as sounds in this program. A sampled drum track would greatly enhance the finished product.

However, the sound edit page is, by far, the most enjoyable section of the program. It's a pity that you can't incorporate the sounds you create here in other chip music programs.

The program is reasonably easy to use, although a little fiddly in some departments. The absence of the normal file selector is annoying as is the lack of access to Accessories. As *Music Mon* doesn't feature the Digi-Drum sounds that can be heard in more recent chip music programs, the music ends up sounding a little dated. It is, however, very easy to

Music Mon ST welcomes you with some nifty chip music and this screen as it loads. Remember to click your mouse button and wait a little while for the main program screen to appear.

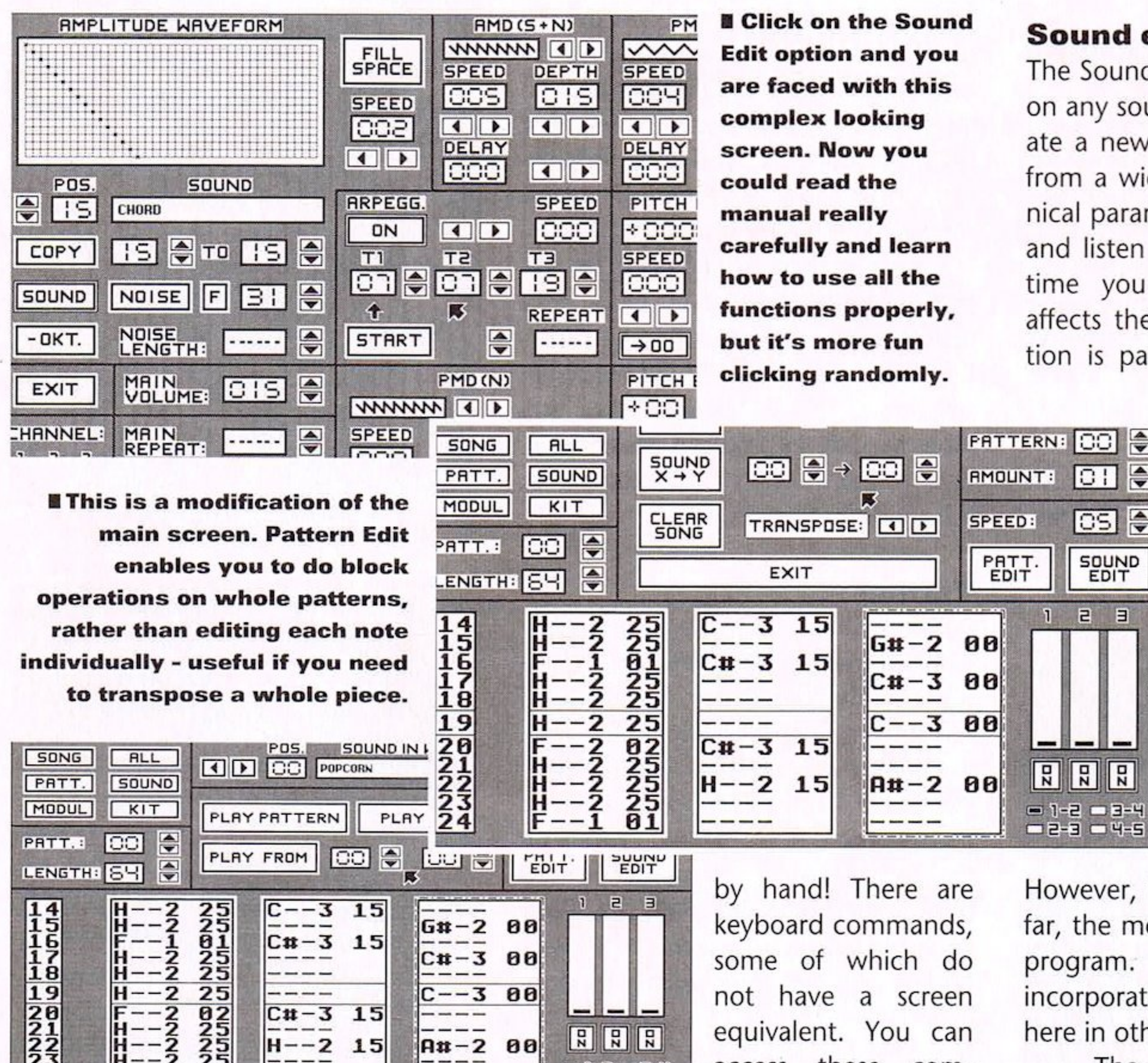
incorporate the finished product into your own programs. Galactic are always generous with their source code provision.

Verdict

Music Mon is a functional program but has nothing to offer the UK market that isn't already covered in the PD. Offerings such as *Megatizer* and *Tri-sound* compete all too easily with this commercial program which doesn't offer anything new or innovative. We look forward to v2 and wonder why this version has been released in the UK when the updated one is almost ready.

As the price is a little steep and the program a little dated, buy *Music Mon* v1.2 only if you like expensive A5 ring binders.

ANDY CURTIS



This is a modification of the main screen. Pattern Edit enables you to do block operations on whole patterns, rather than editing each note individually - useful if you need to transpose a whole piece.

Music Mon's main screen is a fairly straightforward affair. The three sound channels are represented by the three broad columns full of data. Most of the functions are controlled by mouse clicks on up or down arrows. The speed indicator may catch you out at first. The higher the number shown, the slower the piece.

by hand! There are keyboard commands, some of which do not have a screen equivalent. You can access these commands from within the program by pressing the <Help> key.

The weirdest key combination is the one which enables you to quit from the program: <Shift> <Shift> <Control> <Q>. This means that you have to hold both <Shift> keys down and then somehow hit <Control> and <Q> together. TOS 2 users should

Music Mon ST v1.2

Price: DM44
From Galactic, Julienstae 7,
4300 Essen 1, GERMANY.
☎ 01049 201 792081
Machine: All STs

Highs

■ Runs in colour and mono, good sound editor.

Lows

■ Far too expensive, corrupts Desktop in TOS 2, no Digi-Drums.

What Else?

■ *Tri-sound* and *Megatizer* are widely available from any PD library.
■ Both of these programs have equal or better features than *Music Mon*.

59
STEERING
WHEEL



DIRECT



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Prices shown are for ST Systems with GE-SOFT Interface. Add £40.00 for a FALCON ready drive with ICD 'The Link' Interface.

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FALCON - THE

Your Falcon's built-in hardware gives it the leading edge of home computer technology. Now you can boost your machine's performance by adding powerful peripherals



■ It looks good and it does the business on your Falcon. A 14inch VGA monitor is just what you need for your Falcon.

Atari's Falcon030 is potentially the most versatile home computer available. With its true colour capabilities, CODEC and DSP based sound system, and its internal and external expansion possibilities, the Falcon is a hard act to beat. There are many hardware add-ons available that increase its power and performance, ranging from accelerator boards to colour hand scanners. Some add-ons are more essential than others depending on what you intend to use your Falcon for.

Enhancing your Falcon system with accelerators and screen boosters improves the overall system performance. Graphics software benefits from these types of upgrading in two ways, you have a greater screen area to work in with the resolution boosters and all screen

updates are performed at a greater speed with a 32MHz accelerator board installed, a boon with graphics programs that perform constant screen redraws and scrolls.

Mass data storage is a must with the Falcon, every piece of software you buy for the Falcon is

"Enhancing your Falcon system with accelerators and screen boosters improves the overall system performance"

going to be hard drive installable - many of the programs won't even work unless you have a hard drive or other mass storage system.

Price is another major factor when considering any upgrade - the bigger and more powerful the upgrade then the more it's going to

AN STUNNING LINE-UP



■ The Falcon and friends - a colour scanner, memory upgrades, a hard drive, a CD ROM, a colour digitizer, PC emulator... this list goes on. All available to increase the performance of your Falcon.

HARD STUFF

■ These tiny little adaptors do a big job, they can increase the screen area of your Falcon's display enabling you to see more of what's going on.



cost, serious direct to disk recording requires an enormous amount of hard drive space – we're talking Gigabytes of disk space here rather than Megabytes. You don't need to opt for the biggest drive but it's worth considering that picture files using 256 or 32,000 colours take up a lot of space – so it won't take you long to run out of room to store all your graphic files.

Any hardware upgrade is going to cost you money – possibly a great deal of it – but your system performance can be improved by adding extra hardware to give you that extra edge.

Video enhancements

Now you've got your Falcon on your desk, you want to get to grips with all the fantastic screen resolutions and colours available. There's no need to worry if you've only got your old ST colour monitor or a TV, you can use the Falcon's true colour modes to output pictures without any problems. The only configuration that you can't view on a TV or standard monitor is 640x480 VGA mode, you need a VGA or SVGA monitor to see this.

An Atari monitor enables you to view resolutions up to 640x400 in interlace mode, the picture in

this mode flickers wildly when viewing the Desktop or text based applications but is rock steady when viewing graphics in an art program. Conversely, you cannot use true colour in any 80 column mode on a VGA monitor, you are restricted to the 40 column modes when it comes to true colour. That said, it's worth getting a VGA or SVGA monitor as you can increase the resolution of the screen beyond the limits placed by the Falcon's internal hardware using one of several new adaptors now available. These work in the same way as the Autoswitch Overscan boards do on the STFM and Mega STs.

Screenblaster from Compo and the Blowup series from System Solutions are small plug-in upgrades that enable you to set your Falcon's display to higher resolutions, with the aid of a small software boot program you place in the Auto folder. You set the screen size required using the configuration software, the adaptors

are simply fitted externally plugging into the monitor port and the joystick port. No internal modifications are required and the adaptors cost under £100.

Coupling one of these adaptors with an SVGA monitor is the easiest way to turn your Falcon into a serious graphics workstation. Of course, you need the right software but you are on your way to creating a true professional setup.

Getting the correct monitor for your needs is vital. VGA monitors start at 14inch screens and cost about £150. SVGA monitor prices start at the £200 mark, they are more expensive because of their higher display resolution. Multisync monitors are the most versatile, with 15inch monitor prices starting at around £450 while large screen monitors with A3 colour displays can cost anything up to £1,500. A 14inch VGA or SVGA is suitable for most uses, you shouldn't get anything larger unless you really need it.

GETTING FASTER

Although the Falcon's central processor runs at an impressive clock speed of 16MHz screen display updates and scrolling can be painfully slow when using a palette of more than 16 colours, it's even slower if you are using MultiTOS.

Future versions of the Falcon are rumoured to run at 32MHz – a sensible move by Atari if the 040 is ever produced. Meanwhile you are stuck with a 16MHz machine unless someone comes up with an accelerator. GE Soft have done just that with their 32MHz Eaglesonic accelerator board. It's a small board that fits neatly in the Falcon's internal expansion slot under the shielding, there are a few wires to solder to the motherboard but it's relatively easy to install. The resulting speed increase in everything from screen

updates to 24-bit true colour raytracing is great, with most tasks running in half the time.

The Eaglesonic board costs £180 from Gasteiner Technologies and is the first hardware accelerator for the Falcon, another version is under development that enables up to 64MBytes of fast TT RAM to be added to your Falcon.

Some new graphics software, such as *Inshape* from CGS Computerbild, require you to install a 68882 co-processor chip in your Falcon. There is a socket provided for the co-processor on the Falcon's motherboard between the power supply unit (PSU) and the internal expansion bus, you can simply plug the chip straight into the socket.

The co-processor is designed as a number cruncher, that is, it takes over the complex calculations required by raytracing programs and other "processor intensive" software, leaving the

main 68030 to get on with other more mundane processing jobs. The co-processor doesn't do this automatically, your software must be able to detect the presence of the chip to take advantage of it. You can get a 68882 co-processor from CGS Computerbild or System Solutions, it costs around £80.

■ The 68882 co-processor simply plugs into the socket inside your Falcon. It

increases the performance of your machine, as long as your software detects it.



ALL CHANGE

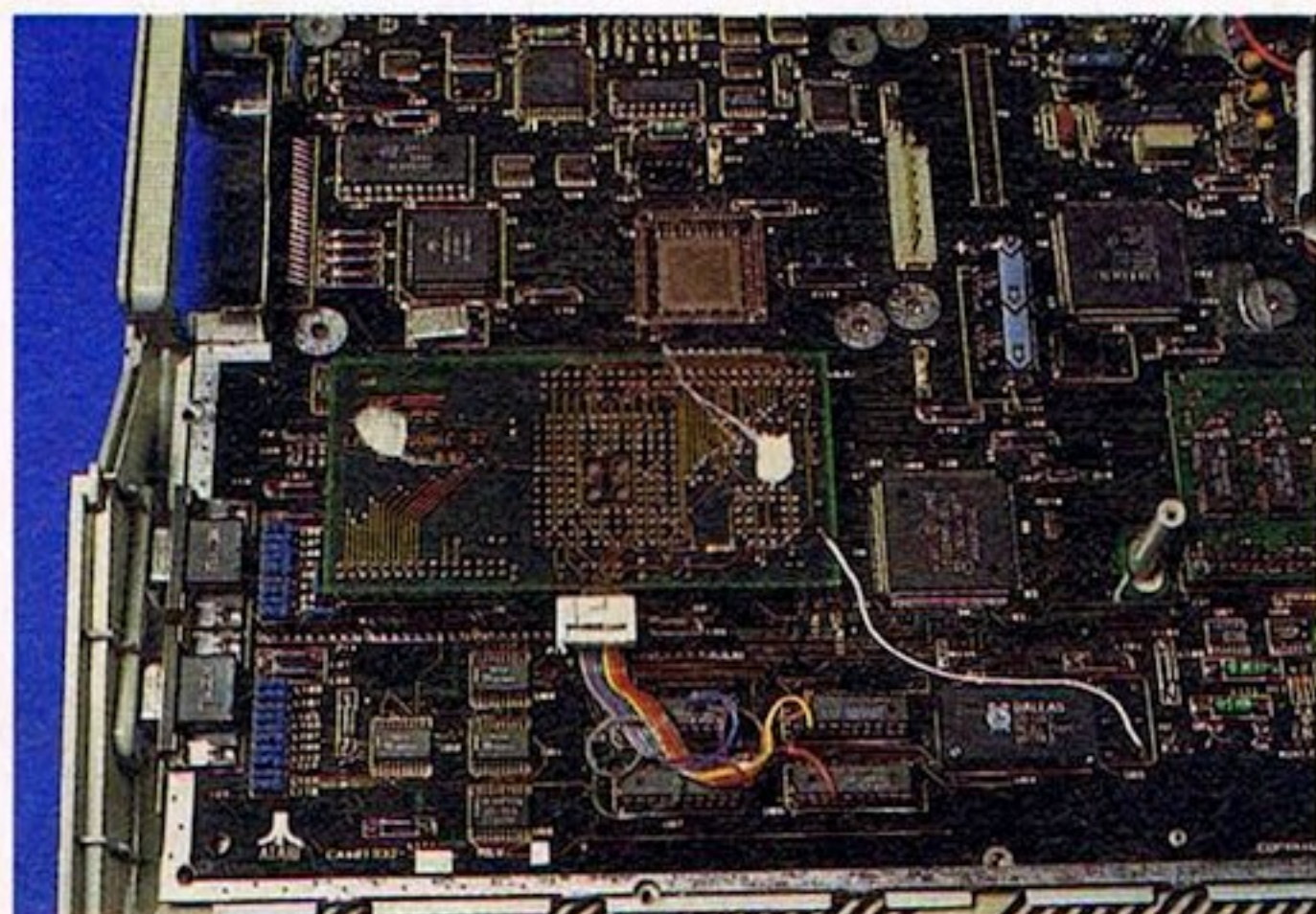
Falcon Speed from Compo Software enables your Falcon to run PC software, including *Windows*! Falcon Speed is an AT 286 emulator that plugs into the internal expansion port of your Falcon, once installed you just have to run the emulator software to turn your Falcon into a PC for about £230.

This gives you access to the thousands of PC programs that have been written in the last ten years, there's probably at least

hundred times as many programs available for the PC as there are for the ST. The emulator also enables you to use any of the peripherals connected to your Falcon, including printers, modems and hard drives. One other thing to remember, you can't use the emulator to play PC games. 386 and 486 versions are under development, you can upgrade from the 286 board to these when they are available.

A Macintosh emulator for the Falcon is under development by Gadgets By Small following the success of the Spectre GCR emulator for the ST, it's likely to be available early in 1994.

■ This small card is in fact a 286 PC that plugs into your Falcon. It makes you wonder why "real" PCs are housed in such large boxes.



■ Fitting neatly into the internal expansion slot of your Falcon, the Eaglesonic board doubles the speed of your machine. A bit of soldering is required, but it's well worth it for the speed increase achieved.



IMPROVE YOUR MEMORY



■ Get a 1MByte Falcon? Useless. Upgrade to a minimum of 4MBytes using a handy dandy SIMMs memory board. If you want to go for 16MBytes of RAM then you could be paying up to £800 for your upgrade because 4MByte SIMMs are very expensive. Ouch.

The Falcon can have up to 16MBytes of RAM installed internally in its memory expansion slot, although at present Atari are only selling 1MByte and 4MByte versions of the machine. The more memory installed in your machine the better – you can run bigger, better and faster software without constant disk access.

The 1MByte RAM version is basically a waste of time, there isn't enough memory available to run anything but PD software and demos, and even these usually require more than 1MByte if they use 256 colours or more. Even the

games being developed won't run on a 1MByte machine. When buying a Falcon make sure that you get the 4MByte version with a hard drive, you need both the memory and the storage capacity to use your Falcon efficiently.

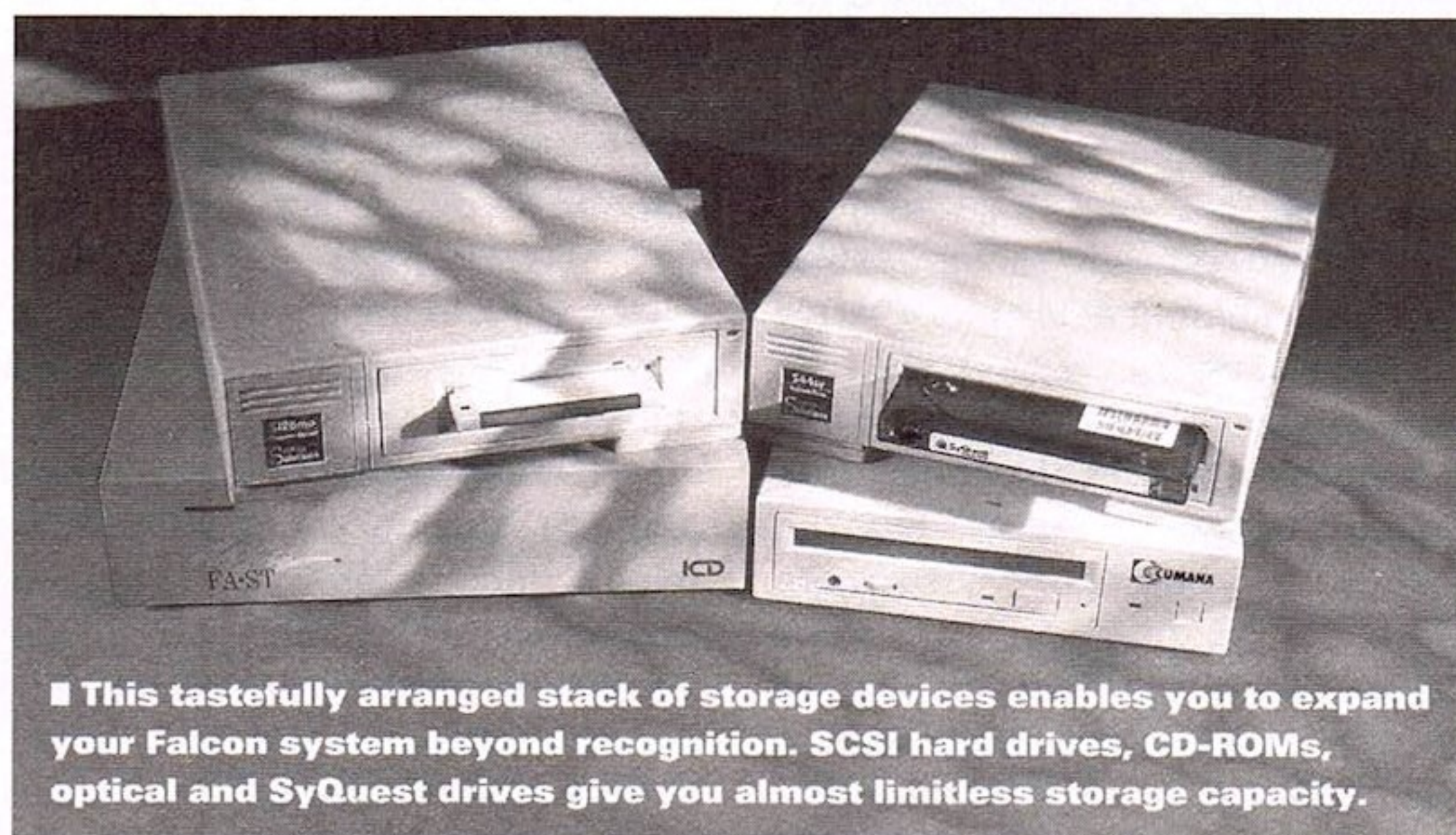
If you are stuck with a 1MByte machine then you can easily upgrade the memory using one of the SIMMs boards available. CGS Computerbild and Gasteiner Technologies both sell a SIMMs board that plugs into the memory expansion slot of your Falcon, although the added height of the SIMMs means that you have to cut a hole

MASS STORAGE

Hard drives, either internal or external, are a necessity for your Falcon whatever you intend to do with it. Even games should be installed on your hard drive to prevent constant disk swapping, besides, if you just want to play games on your Falcon then you might just as well buy a Jaguar.

All serious software is designed to be installed on a hard drive, there is no way that you can run big graphics, DTP, word processing or music software from floppies. Picture and sound files are often larger than the capacity of even 1.4MByte high density disks, there is nowhere to store them once they are created.

Even if you already have a hard drive in your machine then you should consider getting and external SCSI drive because although the internal IDE drive is pretty fast, its speed just can't compare with the faster data transfer



■ This tastefully arranged stack of storage devices enables you to expand your Falcon system beyond recognition. SCSI hard drives, CD-ROMs, optical and SyQuest drives give you almost limitless storage capacity.

rates of a good SCSI drive, and you need large drives for storing graphics and music data. Direct to hard drive recording typically uses a minimum of 10MBytes for each second of CD quality stereo sound, that internal 80MByte drive that came with your Falcon suddenly seems rather modest.

Most Falcon suppliers can install bigger internal drives in a Falcon when you buy it, and

Gasteiner Technologies supply an internal IDE drive fixing kit consisting of a bracket and data cable enabling to install your own 2.5inch IDE drive.

One important point to remember when you are buying external SCSI drives, make sure a SCSI2 to SCSI2 cable is included in the price of the drive. Bought separately these cables can cost between £40 and £50.

SCSI hard drives

SCSI drives are available from almost all traditional Atari suppliers – First Computer Centre, System Solutions, Power Computing, Gasteiner Technologies, Analogic and Ladbroke Computing all supply SCSI drives in various configurations. Bigger drive capacities often work out to be the more economical choice, a one Gigabyte drive (1,000 MBytes) can be purchased for under £1,000.

Hard drives are an essential part of any serious system, you can't work at all without them. Programs can be bigger, data files can be vast, you can use direct to disk software for sound recording, enormous databases can be used, large DTP documents can be created and large screen true colour graphic files can be created. If you have a Falcon, you need a hard drive.

But you're not just restricted to standard hard drives. Because the Falcon has a SCSI2 port instead of the DMA port of the ST, you can

A VIEW FROM BEHIND

Headphone: stereo output for connecting to speakers, hi-fi systems, tape decks.

Microphone: stereo input connecting to CODEC subsystem, used for direct to disk recording, sound sampling.

TV port: RF output for standard TVs.

Printer port: full bi-directional connection for printers, colour scanners, video digitisers.

DSP port: used for peripherals that require direct access to the DSP subsystem, fax modem interface, voice mail, DAT interface, DSP dongles.

Power switch

Power: power input socket.

Reset Button: to reset the Falcon.

SCSI2 port: connector for SCSI hard drives, laser printers, CD-ROMs, optical drives, SyQuest drives, floptical drives.

Monitor port: output connector for VGA monitors, Atari monitors, composite video.

Serial port: connection for modems, serial links to other computers.

LAN: Local Area Network for linking several machines together.

in the shielding above the board. System Solutions also have a SIMMs memory board, Falcon-Wing also plugs into the internal expansion slot of your Falcon but there is no need for shield cutting in this case resulting in a faster and neater installation.

The boards use standard 30-pin SIMMs and can take either four 1MByte SIMMs or four 4MByte SIMMs to give capacities of 4MBytes or 14MBytes, 2MBytes are used by the system when 16MBytes is installed. No other combination of SIMMs is possible, you can't use mixtures of SIMMs to

give any other memory capacity. Both of these boards cost around £80 without any SIMMs installed, you can either supply your own SIMMs or buy boards that are ready populated.

There is a new RAM board under development that enables extra memory to be added alongside the existing board in your machine, the new upgrade plugs into the internal expansion slot and uses the new 72-pin SIMMs that have recently been developed. The new board enables a broader range of memory configurations to be used on the Falcon.

connect directly to all kinds of SCSI data storage devices. These include CD-ROM drives, SyQuest 44MByte removable hard drives, 21MByte floptical drives and 128MByte optical drives.

CD-ROM drives

CD-ROM drives enable access to the data stored on thousands of PC CD-ROM discs. Of course you can't run PC software directly from these discs – unless you have a PC emulator installed – but you can access graphics, sound and ASCII files and load them directly into your software. There are PC CD-ROM discs packed with Bitstream fonts which can be used with SpeedoGDOS to increase your font library in Atari Works and other SpeedoGDOS compatible software. CD-ROMs store up to 550MBytes of data on a single read-only disk, you can't save data to a CD-ROM disc – yet.

At the moment CD-ROM drives only work on the Falcon if you are using the MultiTOS CD-ROM drivers, so you need at least 4MBytes of RAM in your Falcon.

This is the only real advantage of MultiTOS that we have found so far. SCSI CD-ROM drives range in price from £300 to £1,000 depending on the type you get, a double-speed multi-session drive costs more than a single-speed single-session drive and gives you Kodak Photo-CD compatibility.

Removable media

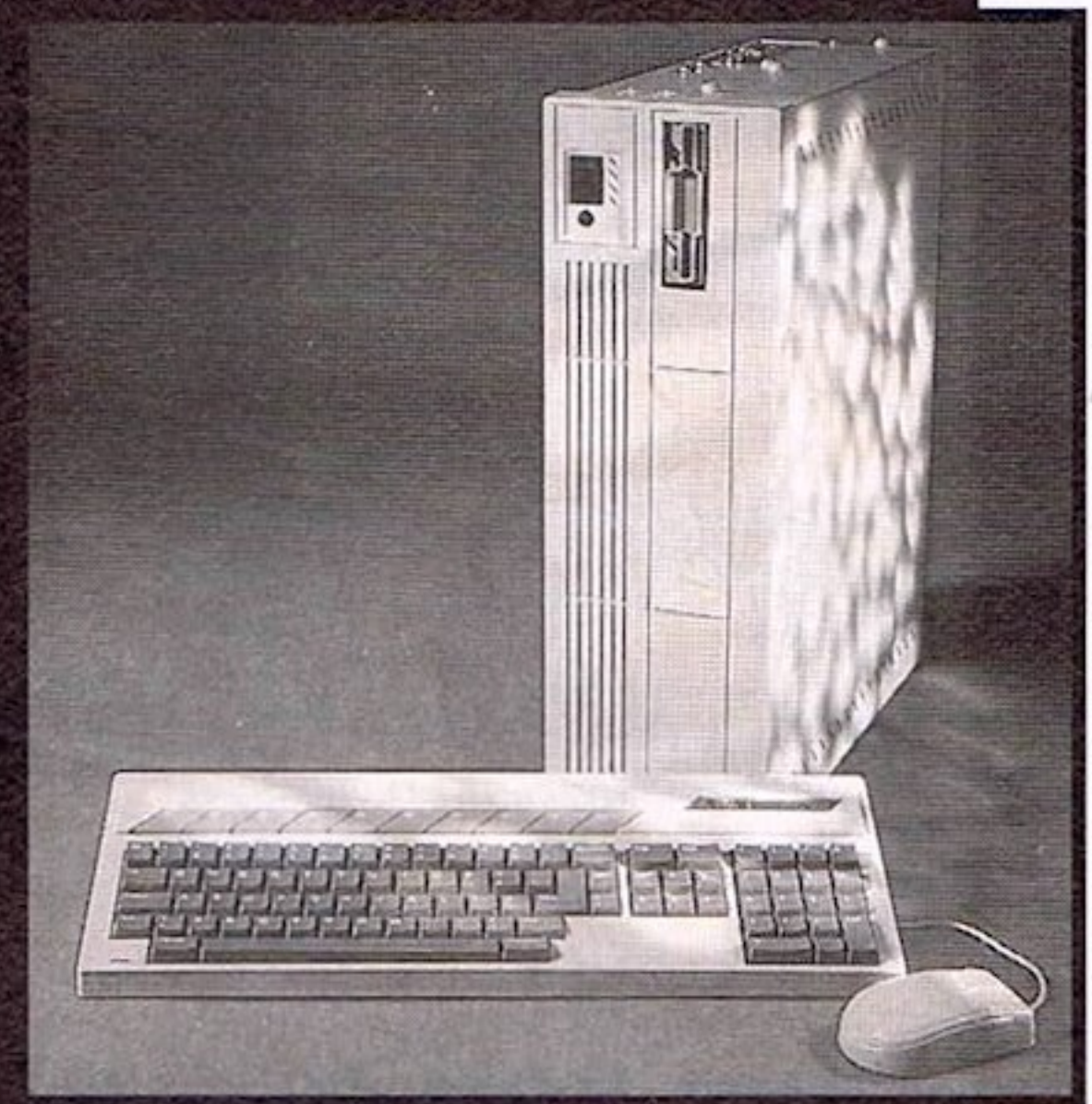
There are three different kinds of removable storage media you can use with the Falcon: SyQuest, floptical and optical. Each has its own distinct advantages but they all have one thing in common – you can save data to the disks. Instead of storing your graphics, DTP documents or sound files on your main drive, you can now store them on individual disks and stack them on the shelf. This leaves your main drive with more space free for applications software with no need to clutter it up with data files.

The least expensive of the three is the floptical drive, it uses special 3.5inch floppy disks which store 21MBytes of data and cost

LOOKING GOOD

The one piece, ST style case of the Falcon was a big disappointment – everyone was expecting a two-piece MegaSTE or TT style machine. If you don't fancy using your Falcon in the ST case then transfer it into a Falcon Tower.

The Lighthouse Tower from System Solutions now comes in a Falcon version with the correct cutouts for the Falcon's expansion ports and connectors, it costs around £200. The Tower case stands neatly under your desk while the keyboard and monitor are on top, leaving you plenty of workspace to pile up stacks of disks. Another advantage of the Tower case is that it has lots of room inside for hard drives, optical drives, expansion boards and memory upgrades.



■ Turn your Falcon into professional looking workstation with the Lighthouse Tower, this system tucks neatly away and provides space on your desk.

around £400 for an external unit with extra 21MByte disks costing about £25 each. 42MByte and 84MByte floptical disks are under development and as a bonus, floptical drives can also read standard 720K and 1.4MByte floppy disks. Floptical drives are much slower than hard drives, but much faster than floppies.

SyQuest drives are available in several formats, the most common is 44MByte. The SyQuest is basically a hard drive in a removable cartridge and is mainly used for standard hard drive backup and archiving purposes. They are slower than standard SCSI drives, but buying new cartridges works out to be more economical than adding extra hard drives.

A SyQuest drive can range in price from £420 to £570 (which includes a cartridge) depending on the type of drive. Probably the

most exciting development is the magneto-optical drives and disks. The actual disk itself is based on standard CD optical technology but instead of being read-only like a standard CD-ROM disc, data can be saved to it as well as being read from it. Each disk can store 128MBytes of data and is the same size as a standard 3.5inch floppy, making it easy to store.

Price is the telling point here, an optical drive costs around £1,000 but the disks themselves are available for around £40. This means that once you have three or four optical disks your data storage costs are reduced quite considerably than they would using a standard hard drive.

Optical drives are slower than hard drives with typical data transfer rates about a third as fast, but they're a hell of lot faster than floppy drives. **stf**

SCANNING AND VIDEO

With the improved colour capabilities of the Falcon it's now possible to use true colour scanners and video grabbers directly with the machine.

Colour hand scanners are now available for the Falcon using the printer port rather than the cartridge port, a good idea because the cartridge port is likely to disappear from future versions of the Falcon. Colour hand scanners enable colour photographs to be scanned and

imported directly into art and graphics programs for retouching and printing. Your DTP software can use the pictures created to great effect, colour graphics are always more impressive than mono. Gasteiner Technologies can supply you with the Migraph ColorBurst hand scanner for £400, currently it's the only colour hand scanner available.

Video grabbing can also be performed in true colour, the latest version of VideoMaster from Hisoft/AVR combined with their new ColourMaster RGB splitter can grab still pictures with stunning clarity and only

■ At last you can scan in colour, the ColorBurst scanner enables you to pinch any colour photograph and include it in your documents.



■ VideoMaster was a hit on the ST and it's pretty good on the Falcon too. It's a great shame that its true colour mode only works with still images.

and at a screen resolution of 512x512 pixels. Rombo are also

working on a new version of their Vidi range for the Falcon, although no firm details are available yet.

Because the cartridge port isn't going to be implemented in the next generation of Falcons, any hardware that relies on the cartridge port must be redesigned to use the printer port or DSP port connections.

costs about £100, with the ColourMaster costing around £50 if you buy them at the same time. The pictures created can then be used in your other graphics software in the same way as normal pictures.

16-bit true colour real-time video grabbing is promised by the Exposé video digitiser from Titan Designs, 25 frames per sec-





STUDIO PHOTO

Have you got pictures with loads of colours? You need a 24-bit image processing package. Really you do

Trying to increase the contrast on a picture using a traditional paint package is a Herculean task because you have to go through the colour palette and adjust each colour individually. Image processing with a program like *Studio Photo* enables you to adjust the relative contrast, brightness and saturation of a

picture in just one operation. Clever effects like motion blur can be added, and all sorts of weird filters applied to an image. A big advantage is that it runs on all STs, TTs and the Falcon.

The very best graphics are 24-bit. Each pixel or dot uses 24 bits of information to describe its colour, 8 bits each for red, green and blue. This gives a grand total of 16.7 million possible colours, more than enough to make the result look photographic. *Studio Photo* holds all its pictures internally as 24-bit ones. On-screen you get an approximation of the picture using dithering. The quality depends on the machine you are running it on. The pictures look fantastic in true colour on the Falcon, in 256-colour modes they look pretty damn good. It runs on an ST in all resolutions but the lack of colours make it difficult to see what's going on.

Dealing with 24-bit images takes up space, 1MByte gets you

■ The spherize function which is very, very slow. The effect is pleasing though. Some more image distortion effects like this would go down well.

going but two or more are recommended. The range of picture formats it can load is excellent, it includes all the popular 24-bit formats. It can even load *Neochrome* and *Degas* pictures, you can fiddle about with them and save them out as 24-bit or 256 colour pictures.

Colour process

Pictures are loaded into a standard GEM window and all the image processing functions are accessed from the menu bar. Click the right mouse

File Work Effects Windows
:\GIFS\FANTASY\FANTASY3.G



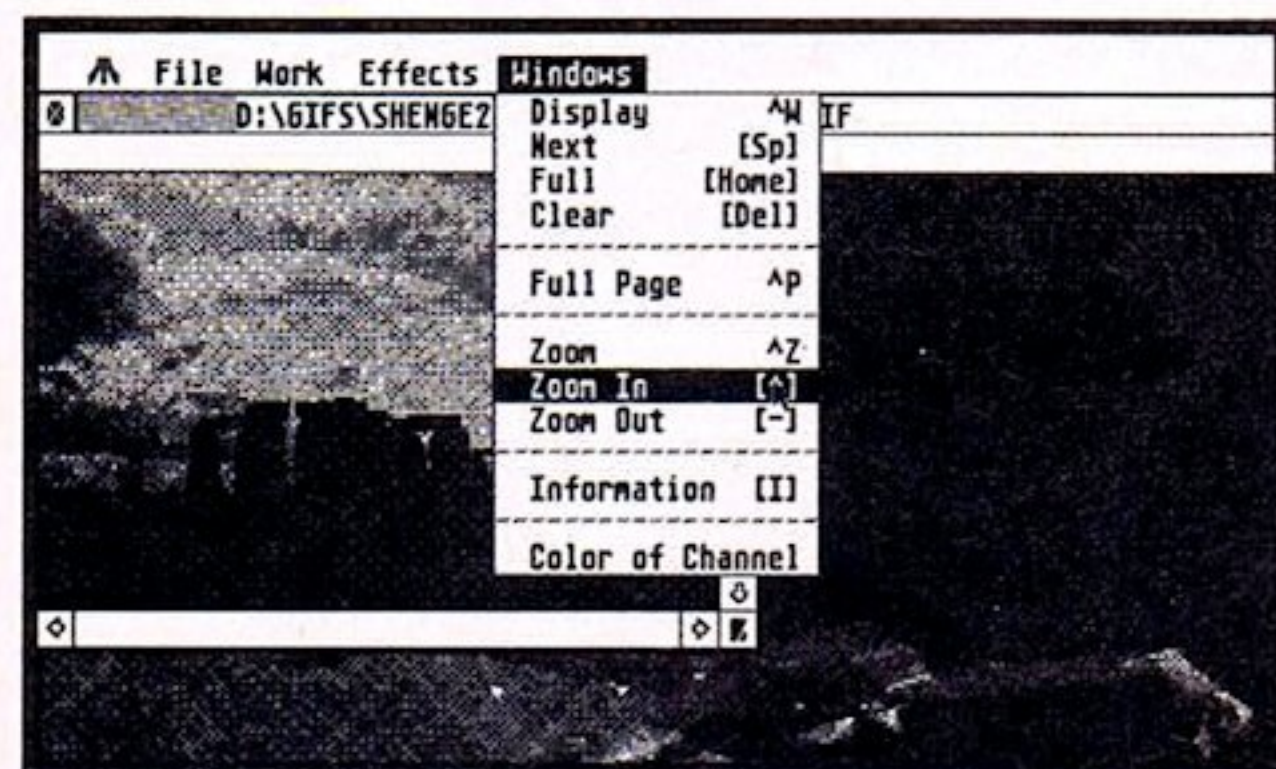
■ Working in greyscales on an ST is much easier DTP territory. This amazon started life as a 256-colour GIF before greyscale conversion and a contrast tweak. However, you still need to print the result to see the full effect.



■ *Studio Photo* running on an ST in low resolution with a 24-bit Targa loaded. The crude 16-colour dithering makes it difficult to see what's going on, although everything works perfectly well. Only really useful if you know the effect you are after before you begin.

button and up pops a tool box of drawing functions. The range of processing tools is fairly comprehensive and includes some very strange filters as well as the obvious stuff.

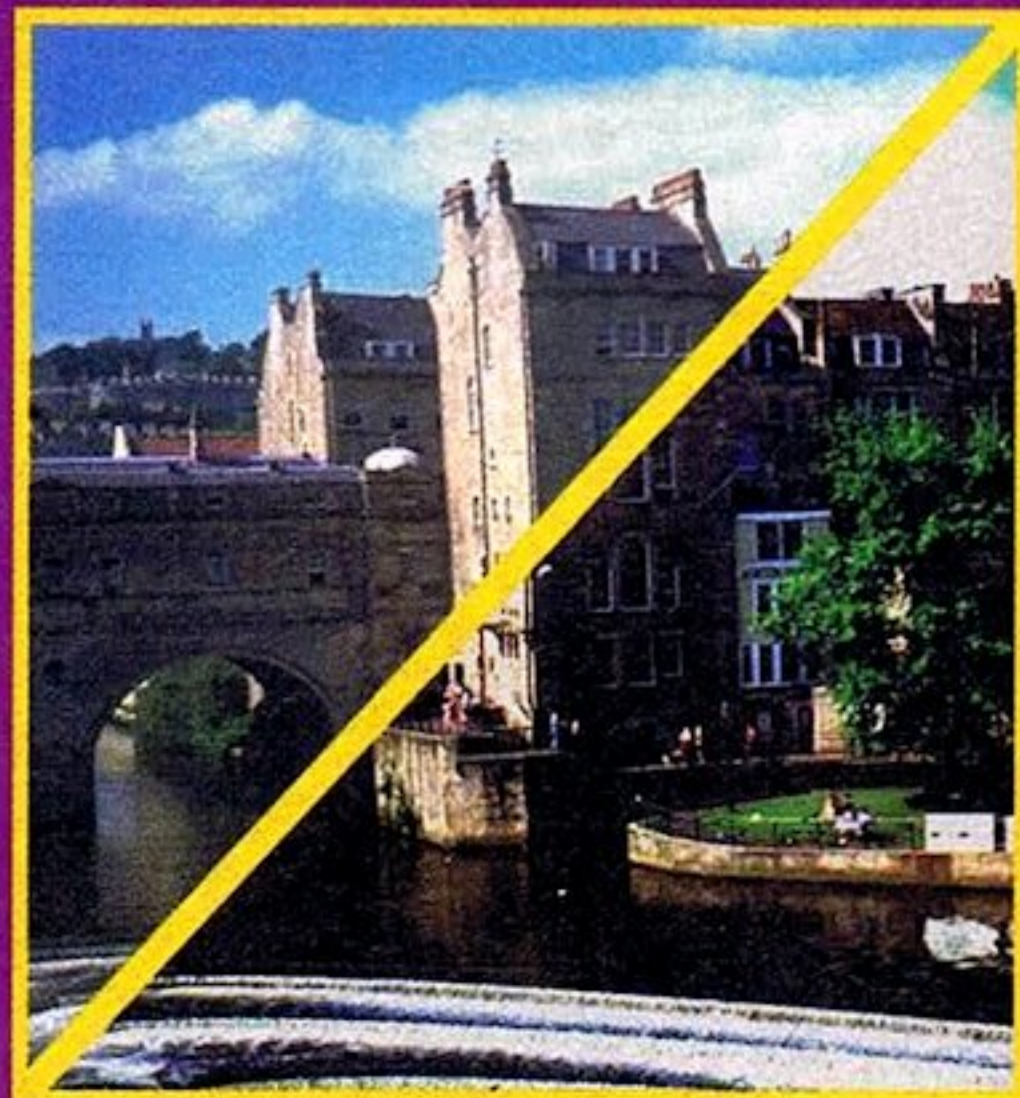
The speed of the functions ranges from a quick stare out of the



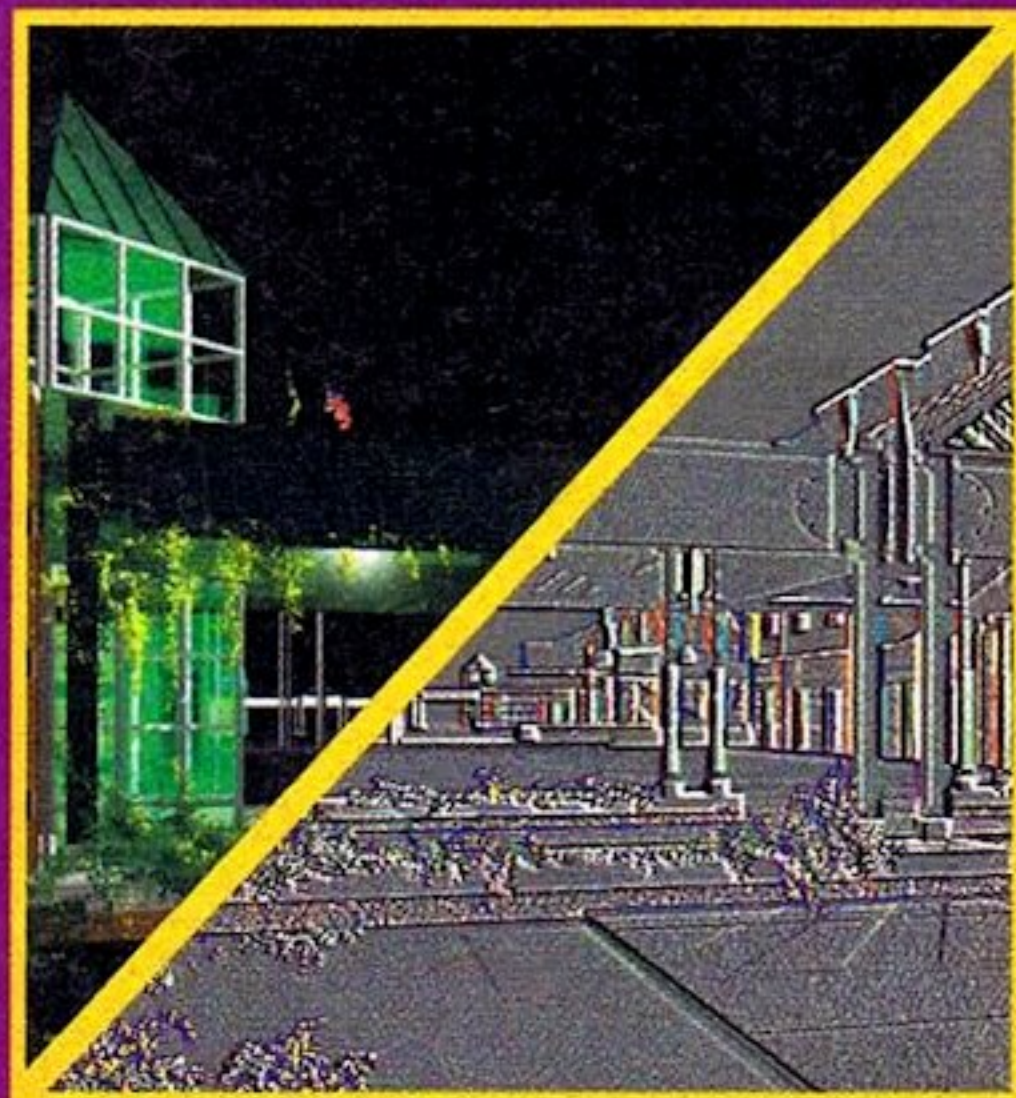
■ High resolution on the ST, not ideal really, unless you like guessing or know just what you want. The screen dithering isn't adjustable making some pictures almost impossible to see at times.

AN INTERESTING PROCESS

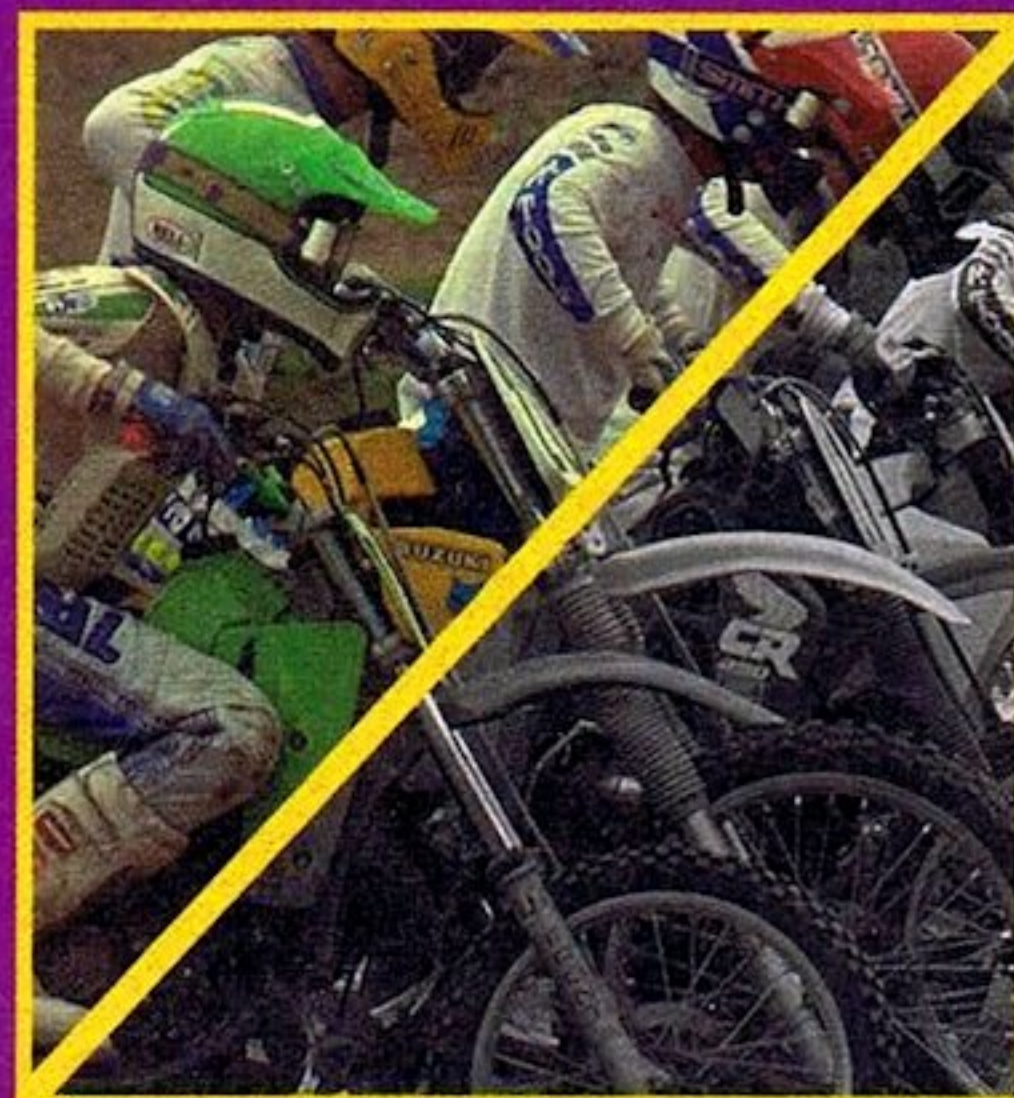
Some of Studio Photo's myriad of image processing tools put through their paces



■ A Photo-CD image given a tweak using the brightness and contrast function. Each is fully adjustable. Any washed out or dim pictures can be transformed.



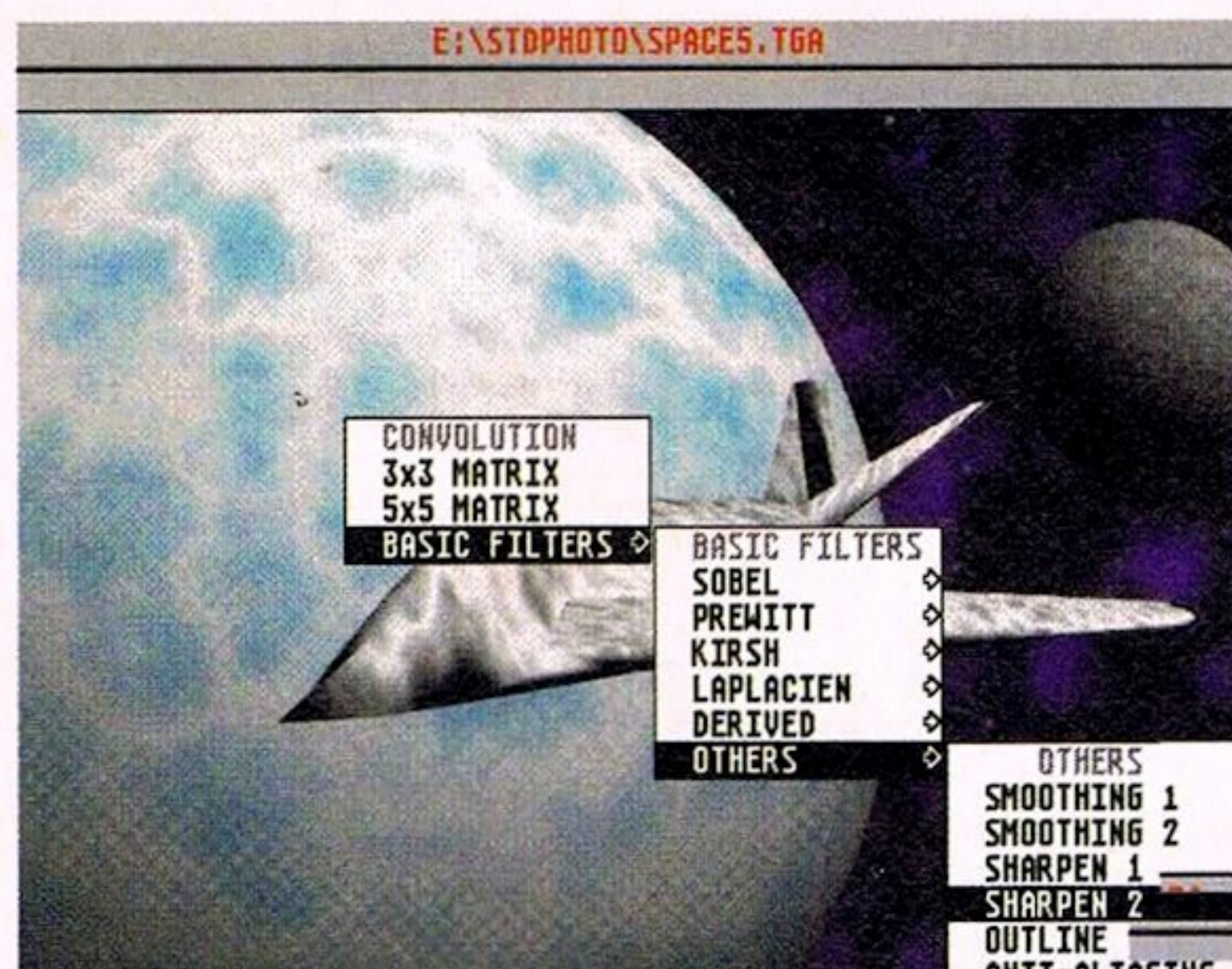
■ One of the wilder ones - this is one of the Laplacien filters doing strange things. Some of the effects produce startling results and are of limited use.



■ Another Photo-CD image, this time it has been converted in greyscales. Handy if you are going to import the picture into a DTP package for final output in mono.

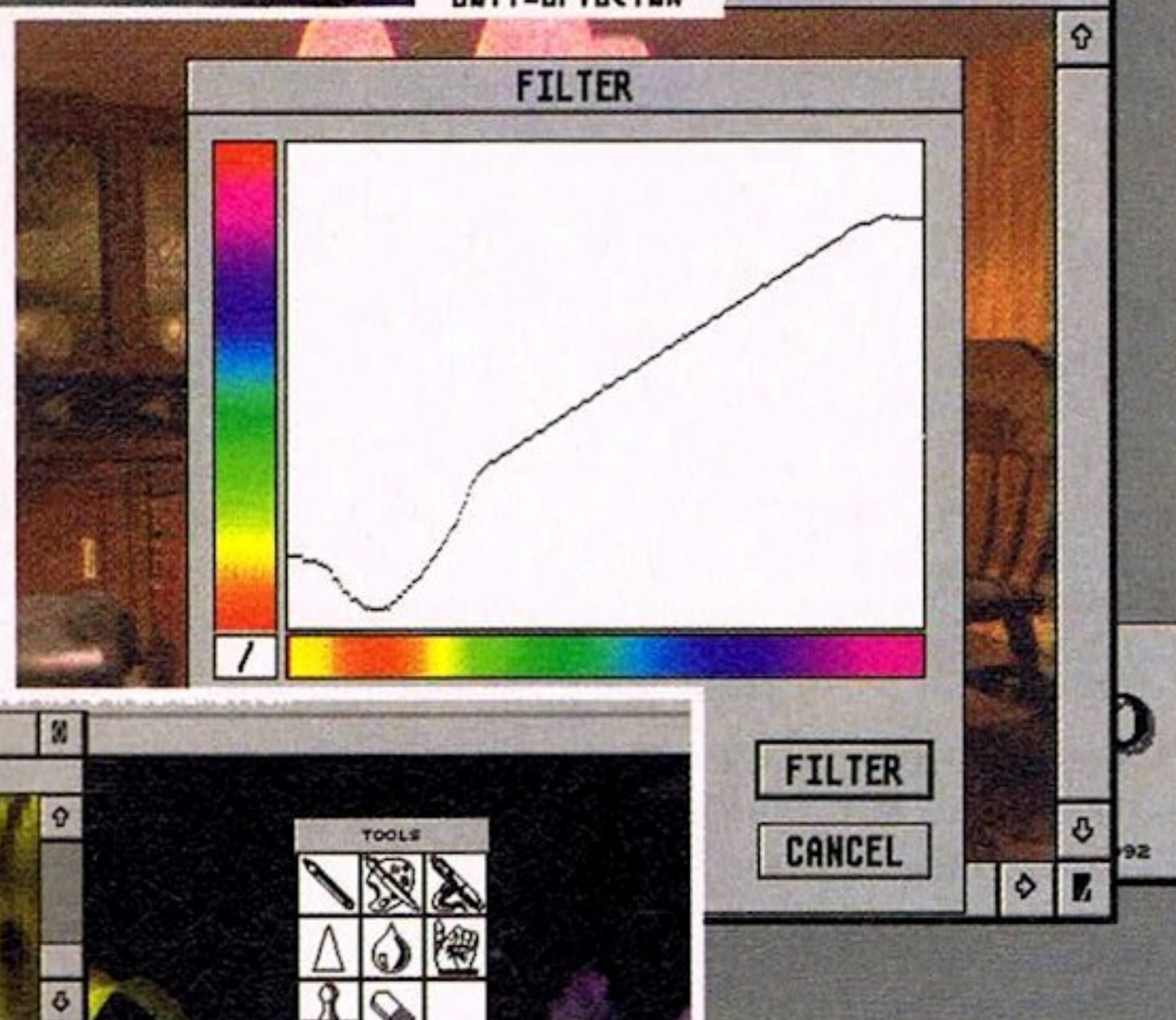


■ Here the colour contrast has been tampered with, changing the parrots colour without losing any detail. With practice you can transform the spread of colours in a picture.



■ **Studio Photo** running on a Falcon in 640 by 480 pixel, 256-colour mode. This is the filters menu and sub-menus, phew. Most of these require a good tea break to operate and the effects vary for radical edge detection to subtle smoothing.

■ The global hue controls - from here you can adjust the relative colour values with impunity. Any colours can be remapped as other colours or you can make smooth changes to the whole range.



■ The pixel editing tools in action. You can zoom in and perform a quick editing operation. Among your weaponry are tools to blur the image and a clever fill function, as well as more usual painting tools.

window while it does the trick, to a popping out to the kitchen, whipping up a roast dinner then sitting in front of the TV while you digest it, then

going back to see if the program's finished. The spherize is probably the worst offender, but adjusting basic things like

contrast and brightness is fairly quick, although the screen redraw gets slow in 80 column 256 colour on the Falcon. The 40 column true colour mode is much faster and gives a more accurate representation of the image, albeit at a quarter of the size.

A good feature is the addition of external modules, making it easy to add extra filter functions. The effects include anti-aliasing, sharpening, removing isolated pixels, inverting colours, convolution, mirror, equalisation and a host more. Image distortion effects are the only areas really lacking; you can't bend the picture into new weird and wonderful shapes. The drawing functions are

similar to the more traditional paint packages. It's geared towards touching up an image rather than drawing one from scratch - ideal for getting rid of unwanted blemishes. As well as pencil, airbrush and fill there are some clever specialist tools to smudge or sharpen an area. You can also copy sections or do a gradient fill with an adjustable opacity - neat trick, that.

Back to the studio

The obvious use of *Studio Photo* is to tidy up scanned images for DTP or raytraced pictures. If you are getting serious about DTP work and have started using some heavy graphics then *Studio Photo* is a valuable ally. It can turn a poor scan into a good one with relative ease. Colour 24-bit images are common in high-end graphics and publishing systems and command a price to match, so for what it does, *Studio Photo* is cheap.

For colour work on the Falcon it's a boon too, true colour graphics cry out for an image processing pro-

compress and decompress these double quick.

NEO - A low resolution ST format that is handy to load in with, if you save out with this format you get a hideous dither pattern though.

PCX - PC Paintbrush format from the world of IBM compatibles using 256 colours.

Photo-CD - Film is developed and put onto CD in 24-bit glory. You need a multi-session CD-ROM drive and a Falcon to use these, but the quality is excellent.

SEF - *Studio Photo's* own file format.

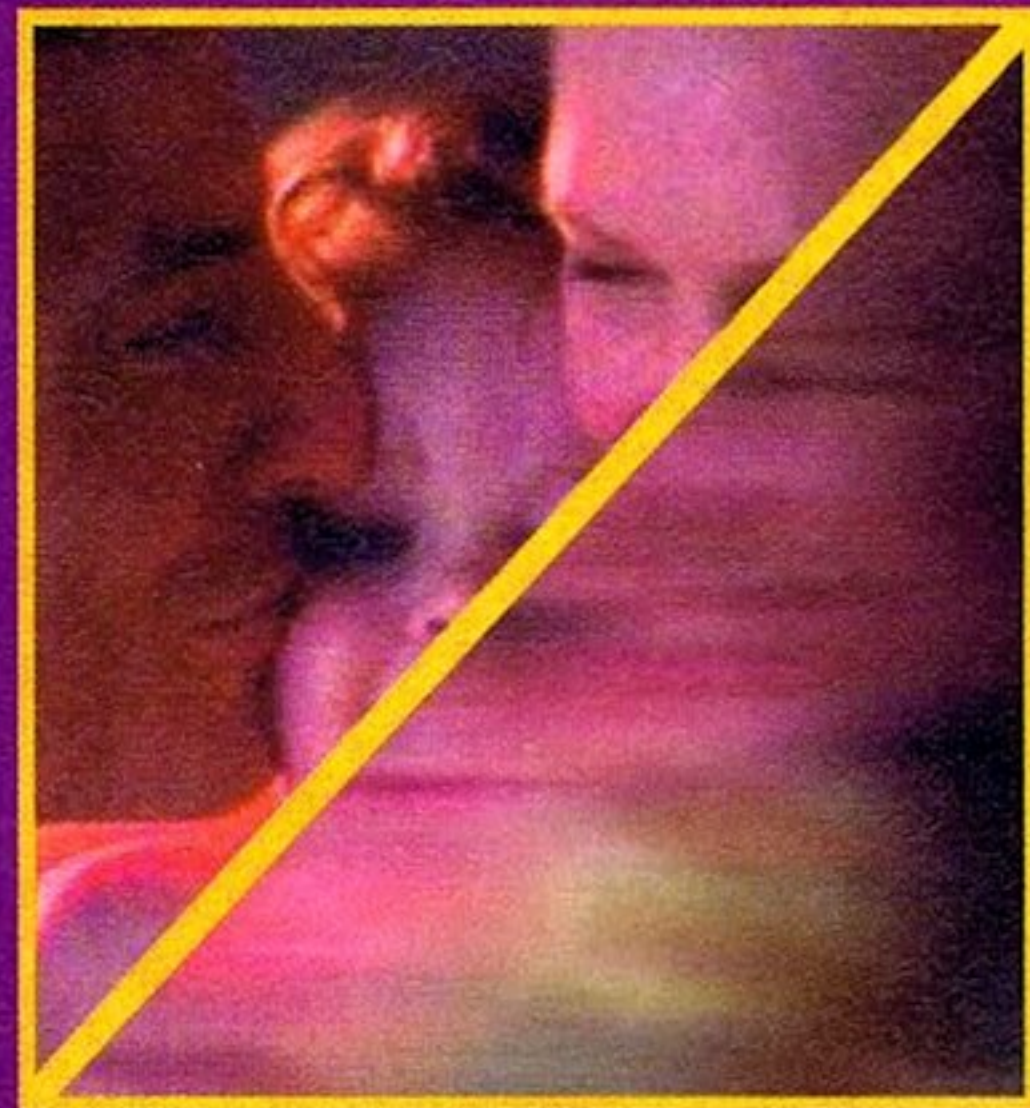
TGA - Another common format, *Studio Photo's* Targas are 24-bit.

TIFF - Industry standard format, *Studio Photo's* TIFFs are 24-bit affairs.

gram. *Studio Photo* complements a true colour paint package like *True Paint* excellently.

It's not all good news though - as it stands *Studio Photo* is an admirable but marred program. The manual is sparse, with very little explanation of the functions. You are left to experiment for yourself, which is time-consuming and annoying. Important features like the global hue filter are only given a few terse paragraphs. The program's sometimes cumbersome operation detracts from the undoubted power of it. It's still a lovely program though, with a decent manual and further development *Studio Photo* has a very rosy future.

CHRIS LLOYD



■ The motion blur effect overdone a bit. A quick way to test an effect is to cut out a small block of the picture to fiddle with first, as there's no undo function.



■ Portions of this castle have been cut out as blocks, altered and pasted back onto the picture in exactly the same place.

Studio Photo

£79.95 Compo Software
☎ 0480 891819

Highs

- Full 24-bit image processing on any ST.
- Some very powerful tools.
- Cheap for what it does.

Lows

- Ridiculously uninformative manual.
- Rough at the edges.
- Some functions very slow.
- Can't cut an irregular block.

What Else?

Didot Professional and Retouche Professional £299 the pair from CGS.



DIGITAPE 2

Professional musicians love the Falcon because of its amazing sound hardware, Clive Parker takes a look at the latest D2D software, *DigiTape*

There's no doubt about it, the Falcon's advanced audio hardware makes other computers sound like pocket calculators. The audio sub-system combining the CODEC chip and the DSP56001 processor places the Falcon right at the top of every serious musician's shopping list.

More and more professional standard software is becoming available and *DigiTape* is just one of several direct to disk (D2D) recording programs released and looks as though it may be the most powerful one so far.

Get in gear

Obviously you need a Falcon to use *DigiTape*, with a minimum of 4MBytes of RAM and a big hard drive. Direct to disk recording requires enormous amounts of disk space, 22MBytes of disk space on our hard drive gave a stereo recording time of just two minutes and 52 seconds at a sample rate of 33MHz.

You can see that any professional musician using *DigiTape* is going to need a hard drive with Giga-bytes of storage space rather than the

usual MBytes – nobody ever said that direct to disk recording was going to be cheap. A fast SCSI drive is preferable to using a large internal IDE drive; IDE drives are not really fast enough for professional quality recording and playback. Ideally you should use the internal drive for the *Digi-*

■ All of the output from the various tracks and modules can be controlled by the master fader in the Multitrack Recording window.

Tape software and the external SCSI drive for the actual tape data files.

DigiTape uses the 640x480 screen mode of the Falcon and it's a good idea to switch to 16 colours in this mode because this speeds up the screen updates enormously.

Using DigiTape

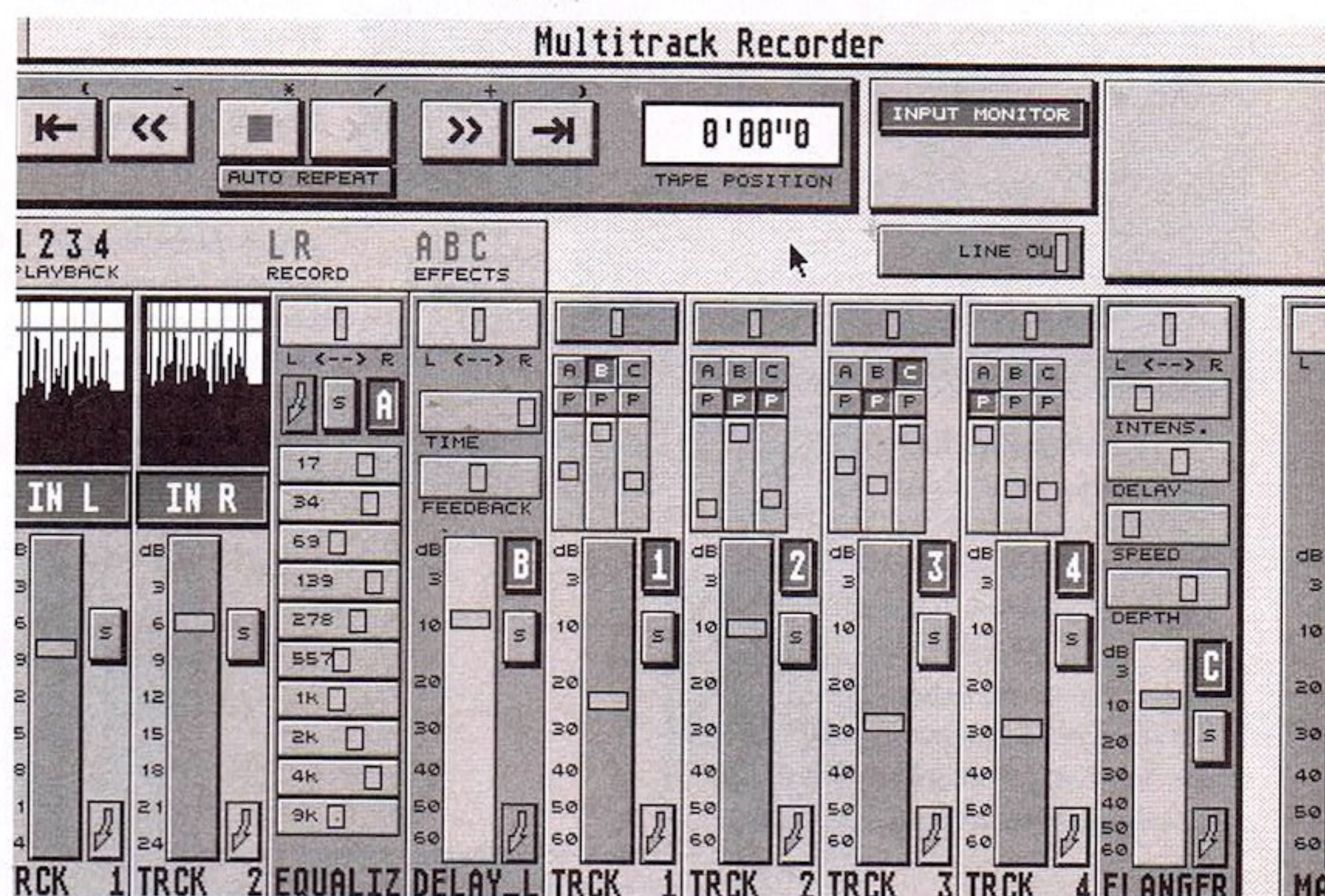
After installing the software on your hard drive and plugging in your line in, line out and DSP port dongle into the back of your Falcon, you're up and ready to start recording. The software asks for a track to be loaded on booting, you can safely ignore this if you are creating a brand new track and move straight into the main screen where you are presented with a few menu bar options across the top of the screen and a large blank area beneath.

It's dead easy to get going. First

"Results are excellent even when recording at relatively low sample frequencies"

you must create a track on the hard drive using the New Track option from the file menu, enter the details of the path, the number of tracks and the recording frequency. Once you have entered the details, the maximum track length possible is displayed based on the total amount of free space on the hard drive partition you are using. You can then enter the track length you wish to use up to the maximum available.

Up to 32 tracks can be assigned in the full version of *DigiTape*, a maximum of two tracks at a time can be recorded but up to eight can be played back at the same time. Hardware peripherals are under development to increase the number of tracks available for use at the time. There have been problems setting up the



■ The heart of *DigiTape* is the Multitrack Recorder window. With all these options you can create all those brilliant songs that you've been dreaming up over the last few years, simply at the press of a button.

track length function with hard drives using the Atari hard drive boot software but we had no problems with our drive using the ICD Pro software.

Recording a track

Zippping through the menu options soon leads you to the two main work areas under the Devices menu, the Multitrack Recorder and the Track Edit options. The Multitrack Recorder is where all recording and mixing functions take place, with nine channel slots available where the various record and effects modules are loaded. The layout is very similar to a small portable recording and mixing module, but is far easier to use with the on-screen buttons and sliders. You can monitor the external line input from within this window and control the output individually using the sliders in the modules or using the master fader.

Nothing happens until you load some modules into the channel columns, click on the Select button at the base of a column and choose Record Track from the pop-up menu. Assign the record track to the left

channel and repeat the process in the second column to set up the right channel. Installing the playback modules and effects modules is done in the same way, click on Select and choose the module to use. All modules can be deselected or hidden at any time so you can use a different function or effect.

Strangely, there's no record button on the tape transport controls – you have to activate the record modules and then click on the play button. Playback is performed in the same way, deactivate the record modules, activate the playback modules and then click on the play button. A rather long-winded method, especially when the earlier *Lite* version of the program has separate record and playback buttons. Once you've made a few recordings it's less of a problem, but this basic design flaw need not have occurred.

Verdict

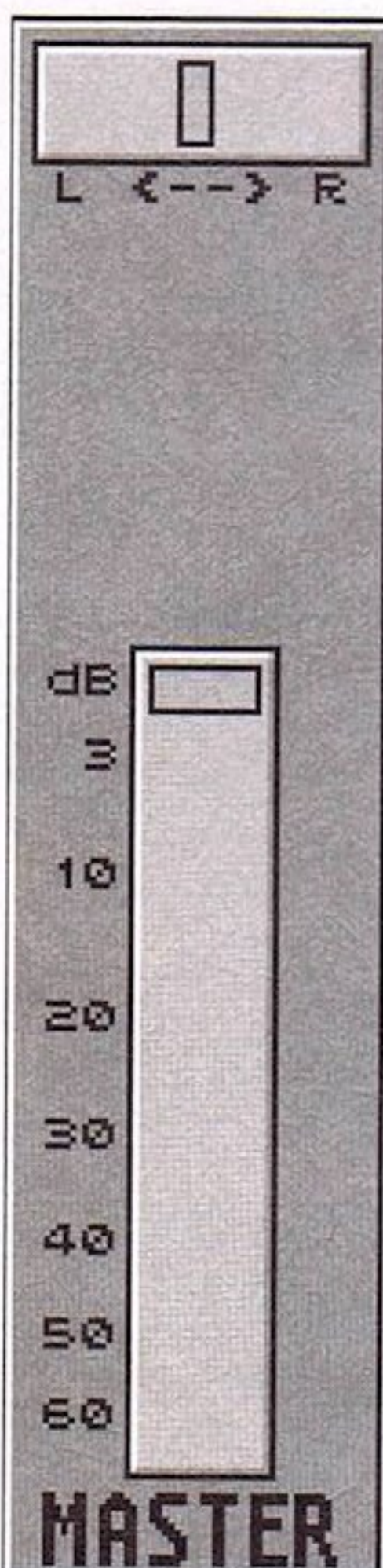
That said, results are excellent even when recording at relatively low sample frequencies. The software does everything it's supposed to, but it's

Direct to disk recording

Direct to disk recording is an off-shoot of sound sampling, but instead of sampling in periods of time measured in seconds, D2D recording is measured in minutes at very high sample rates. Because of this D2D software is capable of acting as a multitrack tape deck and can be used to create complete songs using features

like "bouncing" to combine the contents of two or more tracks on to a third track.

Other more complex effects that would take many hours using traditional recording methods can be performed in minutes using D2D methods, if you don't like a new mix then you can just delete it as you still have the original.



sometimes awkward to get the cursor to have any effect on the controls during recording or playback. The processor seems to be fully occupied with the recording or playback

"Using DigiTape is a good way to get to grips with direct to disk recording"

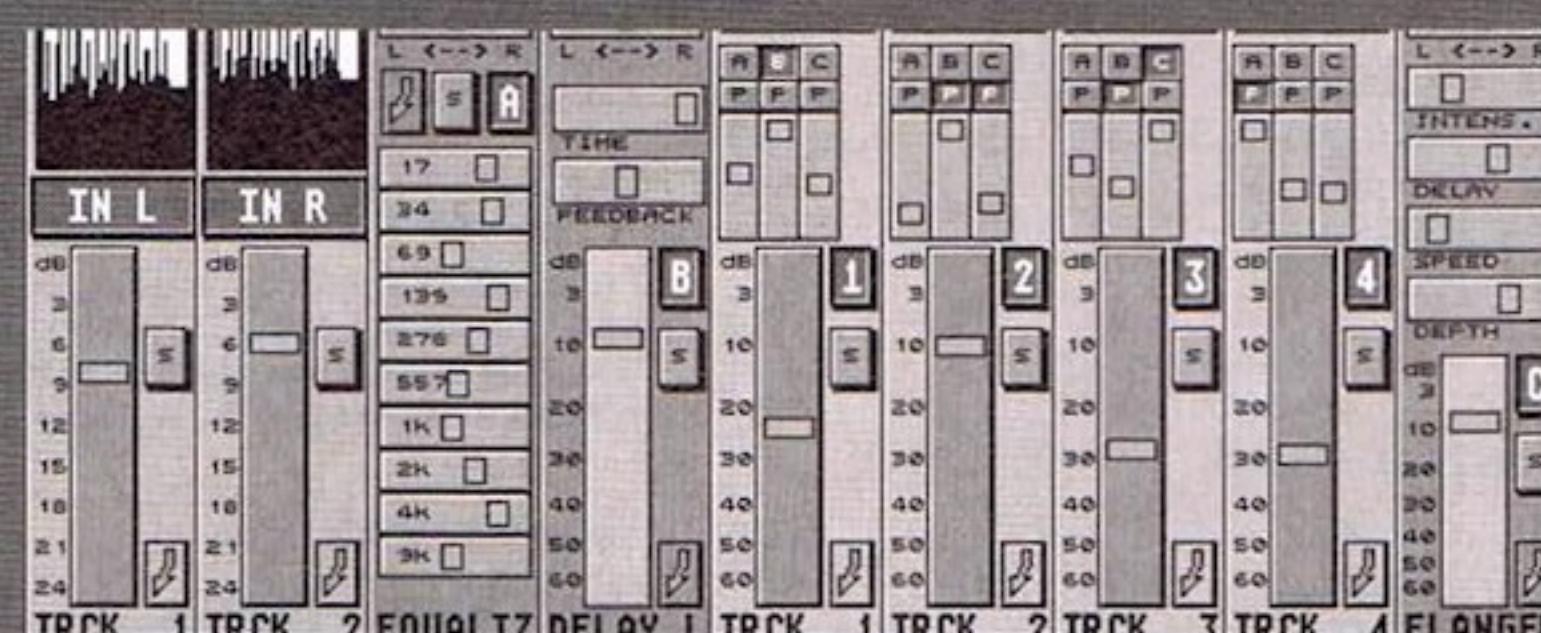
process, the result is jerky, the hard-to-use mouse cursor that jumps across the screen in a demented fashion sometimes taking several clicks to activate a function. Not good.

Using DigiTape is a good way to get to grips with direct to disk recording, although the full version is a tad expensive at £499 for the results obtained. While the program offers a wide range of features and effects, it sometimes seems to take an awful lot of work to achieve the desired results. If the few teething problems we found can be sorted out, then DigiTape could have a bright future. **stf**

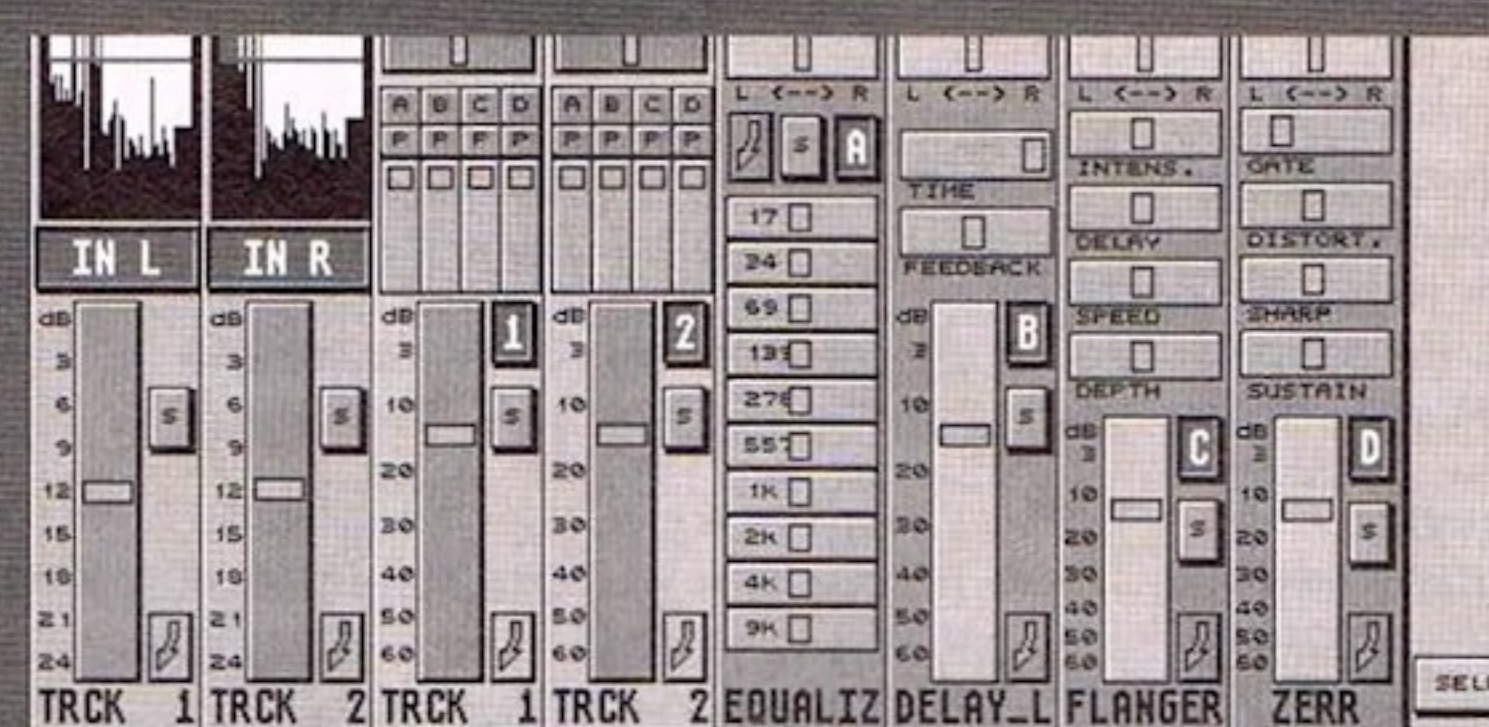
DIGITAPE MODULES

How to use the effects modules isn't immediately obvious to anyone who's not familiar with music equipment, resorting to the manual is a must if you want to get to grips with the intricacies of the flanger, delay, vibrato and the zerr guitar distortion modules. Once you get used to the notion that the lower numbers on a slider scale normally mean the effect or volume is increased, then you won't have any problems.

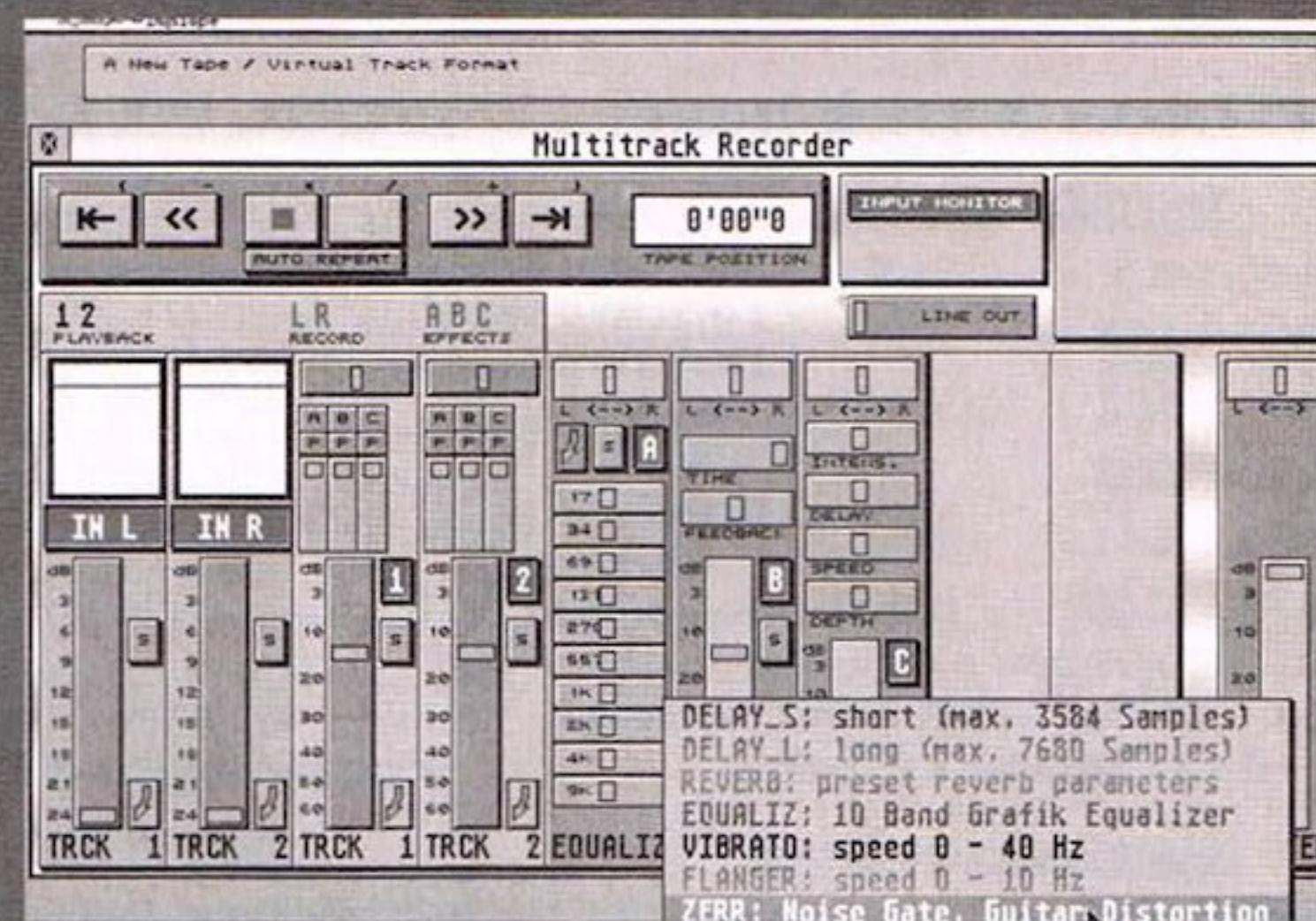
DigiTape is expandable by the simple means of adding new effects modules to the main program, each module can be loaded as required into DigiTape. Trade IT have given ST FORMAT permission to offer the DigiTape Module Construction Kit for download on the STF BBS (0225 465977, file DIGITAPE.TOS) along with a demo version of the program with limited recording time. The kit is supplied with a demo module and full instructions for programming modules in C and Assembler.



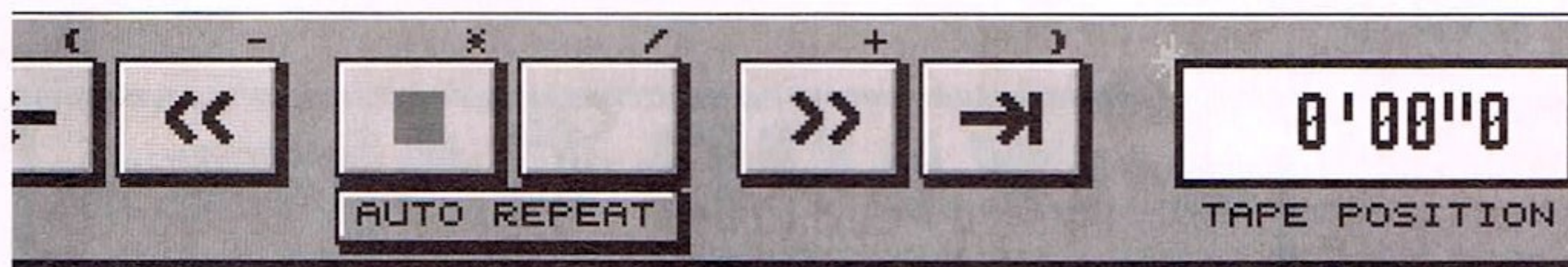
■ You can load as many tracks as you like into the Multitrack window up to the limit of nine. Because you can only record a maximum of two tracks at a time you have to record them in pairs, but you can play back up to eight tracks at once.



■ The effects modules of DigiTape include reverb, long and short delay, graphics equalizer, guitar distortion, and frequency splitter. These take advantage of routines built into the DSP 56001 processor.



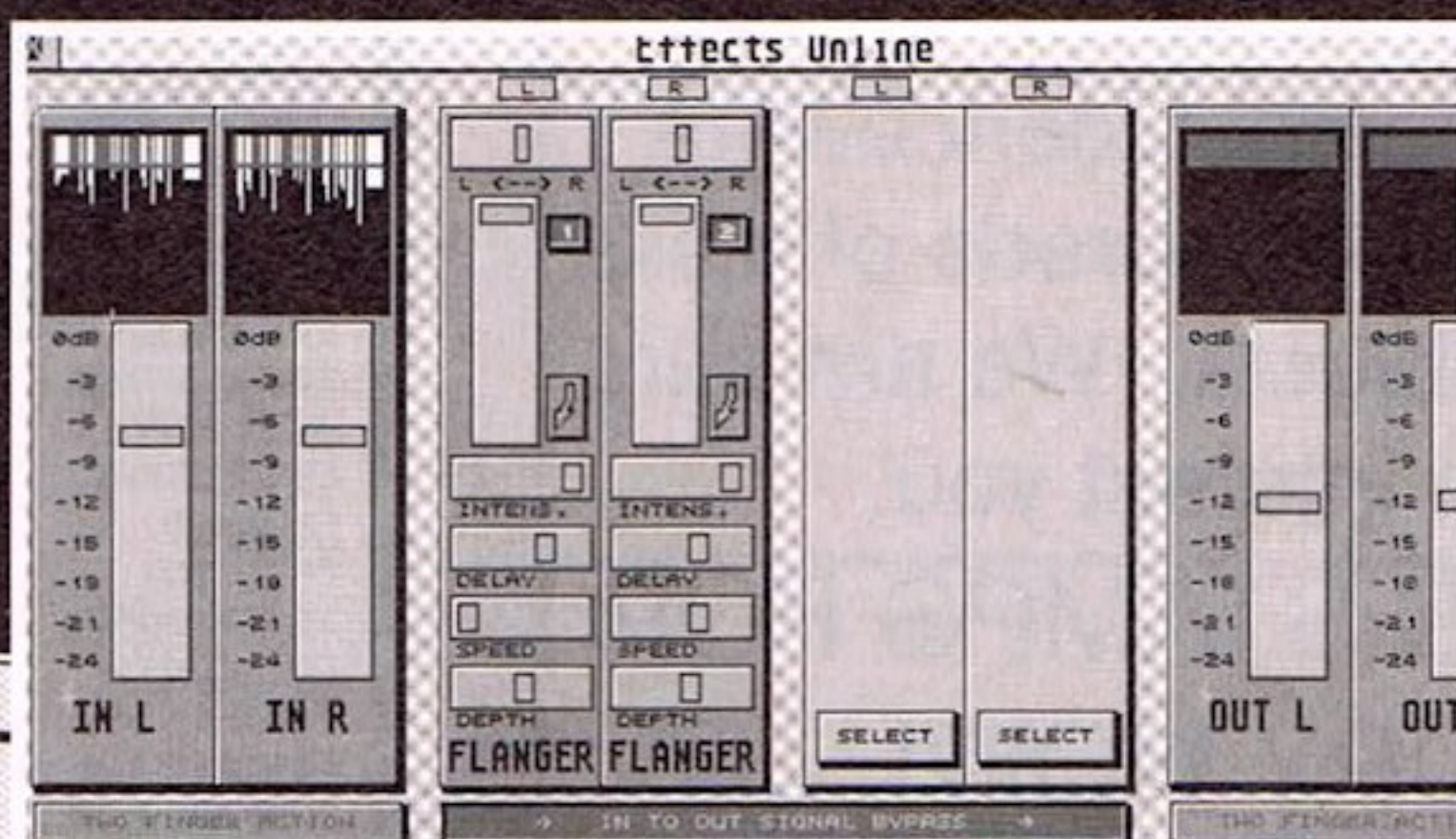
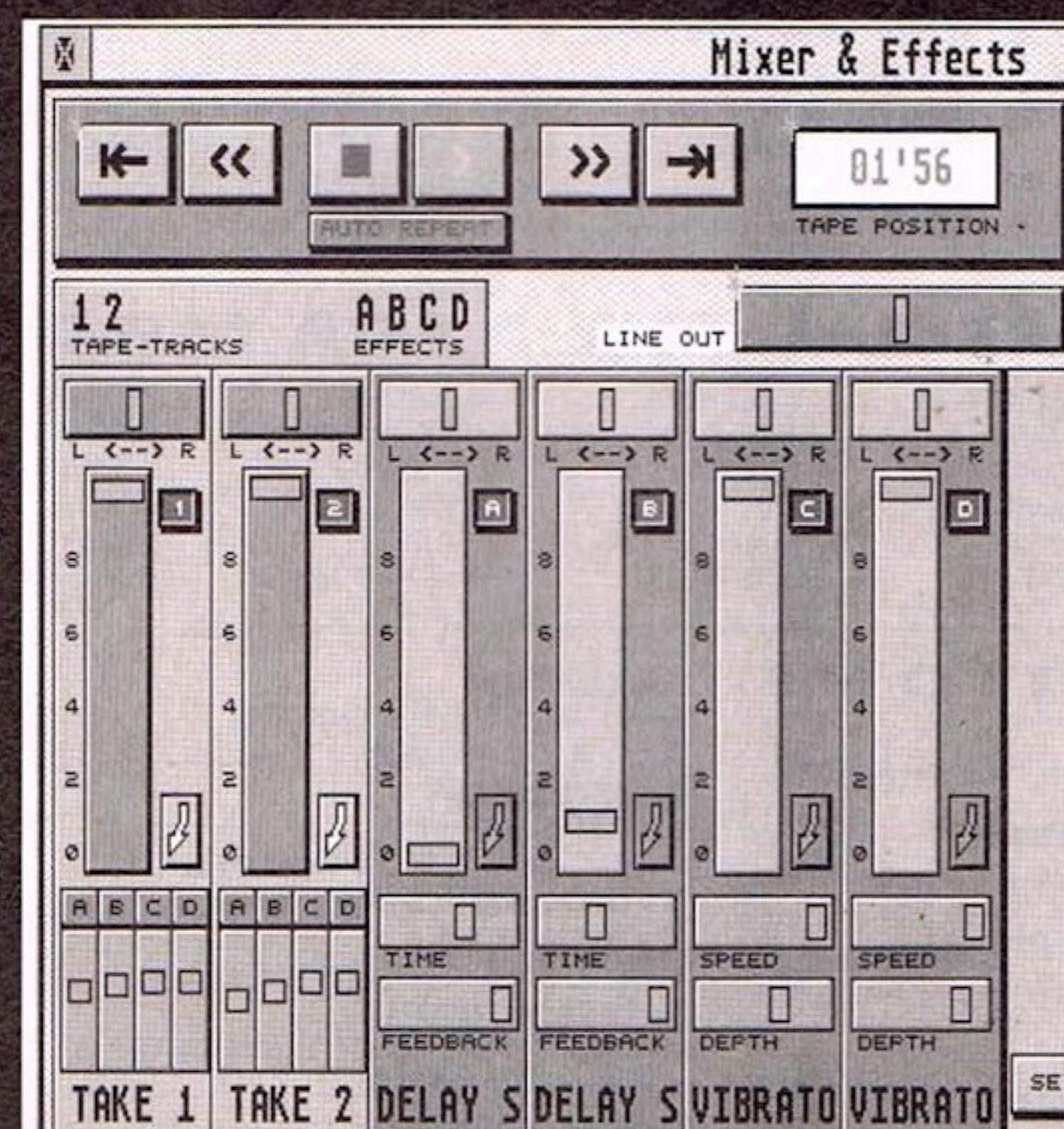
■ Modules are loaded by selecting, or, the Select button at the bottom of the channel columns. This summons a pop-up menu that enables you to load any of the modules available into the column, there's no rigid setup you have to conform to.



■ The tape transport controls work in exactly the same way as the controls on a standard tape deck, it's a pity there's no record button.

DIGITAPE LITE

A cut down version of DigiTape is available called DigiTape Lite. The Lite version has most of the features and modules in the full 32-track package but only offers a fifth of the recording capacity – six tracks compared to 32 in the full version – and some of the editing functions are missing. Unless you are a professional musician and actually need 32 tracks then DigiTape Lite should be sufficient to cover your needs.



■ Above - You can also use DigiTape Lite to manipulate music in real-time and record the output on a standard tape deck, useful if you haven't got much hard drive space left.

■ DigiTape Lite has a few less options than the full version, with the main editing features disabled. Well, it does cost £350 less than the full version!

DigiTape 2

£499 for 32 track version
£149 for Lite version
CGS ComputerBild
☎ 081 679 7307

Highs

- A massive 32 tracks available.
- Good interface, large number of features.
- Good editing options.

Lows

- Jerky mouse during record/playback.
- No record button, module controls can be confusing.

Competition

- 4T/FX and D2D Edit, £299 from D2D Systems (☎ 0223 420252) – its wide range of features and the hardware adaptor (£299) makes this the best D2D system currently available.
- MusiCom, £49.99 from Compo Software (☎ 0480 891819) – basic direct to disk and DSP effects.
- MusiCom 2 – no firm details but coming soon from Compo Software (☎ 0480 891819).
- Cubase Audio, £799 from Harman Audio (☎ 081 207 5050). Promises to be the absolute peak of direct to disk technology, when it's finally released!

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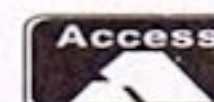
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PUBLIC SECTOR

Delve into the latest PD with the next three pages of Public Sector...

GAMES

MAGIC TOMB

MERLIN PD

NEEDS 1MBYTE

Magic Tomb is reminiscent of the old *Play The Game* arcade/adventures on the Spectrum. Games such as *Knight Lore* and *Sabre Wulf* had a sort of top-down, slightly-at-an-angle view, and although the graphics were black and white they were bright and pin-sharp. *Magic Tomb's* a bit like that. There's

this guy, you see, a nondescript sort of fellow who could be a spaceman, or he could be an explorer. He moves around a huge maze, where all sorts of nasties move in formation: foul sea urchins, and wibbly things that look like bagpipes – general unpleasantness all around, really.

So what's the aim of the game? To get out of the maze, obviously, but whether you have to pick anything up along the way is anybody's

■ Startled by the menacing pair of bagpipes, Carl made his excuses to the host and left quietly.

guess. It all adds to the mystery of the game, anyway.

A warning now: if you're a hardened game player, don't bother with *Magic Tomb*. It's best played by

novices, to get a feel for timing and reactions needed in playing arcade games. Also great as an introduction to games for younger kids.

STF RATING 78%



JIGSAW AND DOMINOES

GOODMANS

DISK GD2026

A jigsaw puzzle on your ST? We can't think of a more bizarre concept, but Dolphin Software have come up with this (main game reviewed last issue, 78%.) On this demo disk you get one puzzle, an image of a tiger, but there are 20 available when you register.

So how do you do it? The image is displayed first of all, then the pieces are jumbled up. You then have two work areas: one containing the pieces, the other a pasting board where you actually put them in their place or not, as the case may be. The pieces all stay the correct way up, so unlike a real puzzle you don't have to



■ Computerised jigsaws? Next we can see ST conversions of *Snakes and Ladders*, *Chinese Whispers* and *Spoof*. Can't wait...

faff around turning them around to try and fit them in.

Like we said: weird; but it's playable – and great for the kids. Also on the disk is *Dominoes*, which you can play against various ST-controlled opponents.

STF RATING 76%

VERTICAL MAYHEM

FALCON OWNERS

GROUP

DISK GFOG 034

Otherwise found as a game called *Columns* on other computer platforms, this version is almost exactly like that game, but with better 64-colour graphics. It's quite like *Tetris*, but instead of different shapes, a column of three coloured blobs fall from the top of the screen. Pressing the fire button on your joystick switches the order of the blobs, and the idea is to build up a row of three blobs of the same colour at the base of the screen – a bit like *Connect 4*. If you get three in a row, they disappear; and the aim of the game



■ What a disaster this would be if it was called *Horizontal Mayhem*, eh folks? (Answers on a postcard if you know what that means, folks – 'cos nobody here does – Ed.)

is to keep going as long as you can. (It plays better than it sounds, honest.) A good puzzle game, definitely worth a look.

STF RATING 78%

LOGIC 2

LAPD

DISK G306

If you're into puzzles, the chances are you come across a logic problem while flicking through a puzzle magazine. A logic problem is a set of six squares, arranged as above, each split into 25 segments. Into each square you place either a cross or a tick, depending on the outcome of six clues which are given to you one by one.

Using the clues, and the process of elimination, you have to match up five sets of answers in a Whodunit? manner. For example, in *Patriot Games*, one of the three problems on this disk, you are given some football match data. You need to sort

LOGIC PROBLEMS II					
By Ben Weston					
Patriot Games					
MR. FLOYD PINK	WATCHED FIVE	ENGLAND FOOTBALL	MATCHES IN ONE	YEAR. DETERMINE	THE OPPONENTS,
THE MONTH, THE	ENGLAND MAN-OF-	THE MATCH, AND	ENGLAND'S RESULT.		
1	2	3	4	5	6
FEBRUARY	APRIL	JULY	AUGUST	OCTOBER	
WON 2-0	WON 3-1	DREW 1-1	DREW 4-3	LOST 0-1	
GAZZA	EMERSON	PIKE	HALE	WOODS	

■ Logic problems are great anyway, but when there's one on offer about football it's all the better.

out which match was played and when. Then your ST marks your answers and tells you where you went wrong.

Three other games are also thrown onto the disk for good measure: checkers, darts and pontoon. A good package.

STF RATING 77%

POWER CUT

LAPD

DISK L51

LICENCEWARE

Jetpac, on the Sinclair Spectrum, is one of those rare games which combines excellent graphics and feels really good to play. You control a Jetman, zooming around a screen trying to retrieve bits of his broken spacecraft so that he can return safely back to Earth.

Power Cut's a bit like *Jetpac*, except that it's a lot bigger. The idea is to manoeuvre a Jetman around a maze of rooms, destroying a number of power sources – plunging the world into darkness, or something like that. Lots of little gun and laser



■ As reviewed in last issue's *Independents* section, *Power Cut* is a great arcade/adventure in the style of classics *Jetpac* and *Lunar Jetman*.

turrets sit around waiting for you, and mercilessly spit at you as you float by. It's quite difficult, and fun for a few hours.

STF RATING 72%

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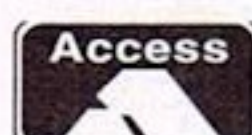
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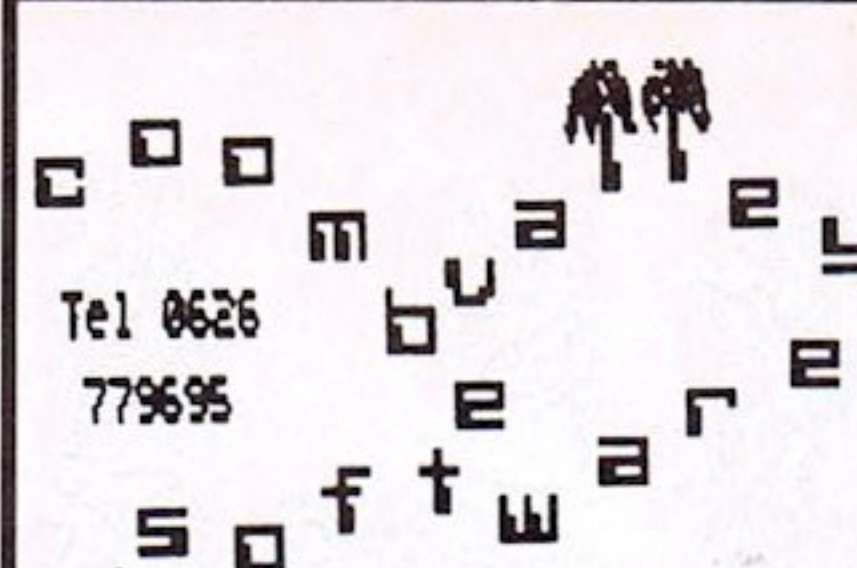
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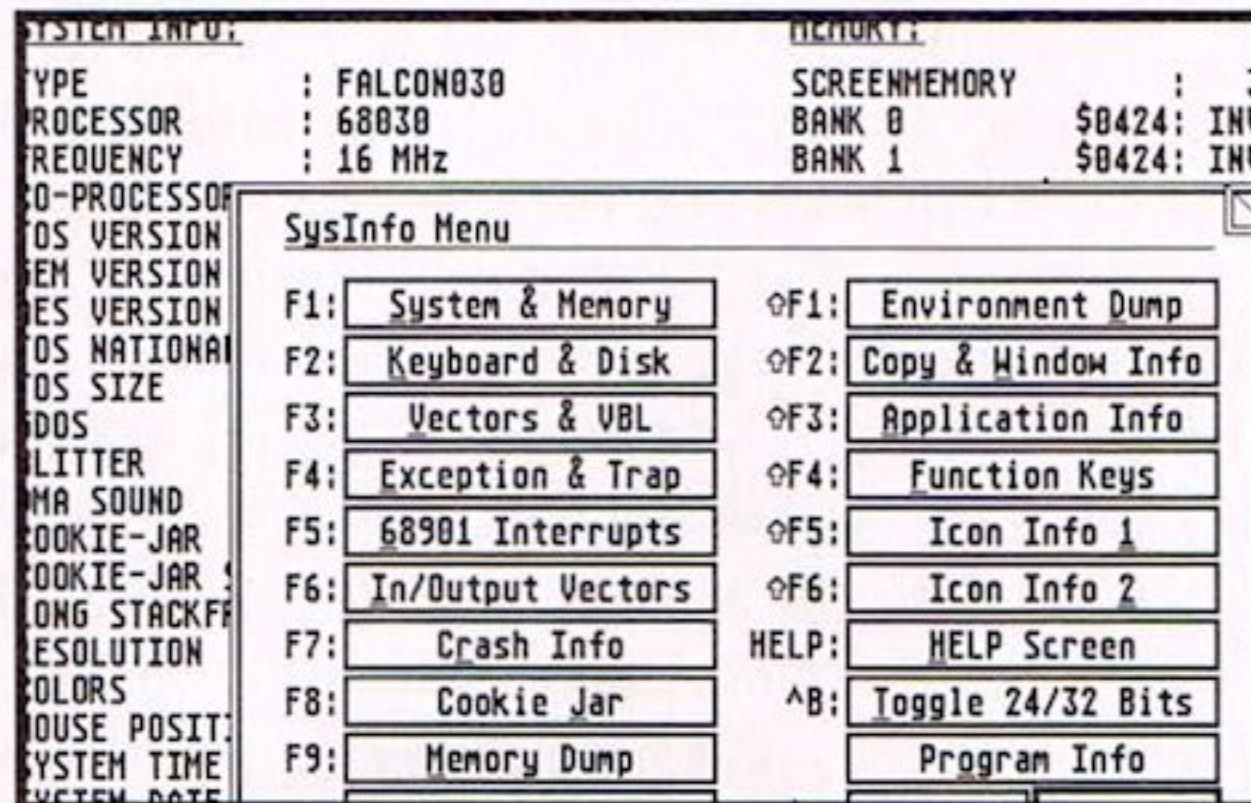
SYSINFO FLOPPYSHOP DISK F3982

Delve deep into the mysteries of your machine whether it's an ST, TT or Falcon030 with *SysInfo*, the most comprehensive system information program ever seen on an Atari screen. The kind of information dis-

played is really of most use if you're a programmer or technically minded and the sheer quantity of data revealed by *SysInfo* is amazing with 17 screens full of information to pore over and digest. Many of the screens can be scrolled, the memory dump is a good example. Among the other excellent utilities on this disk is a neat CPX which displays how much disk space and memory you have available. Good stuff.

STF RATING 85%

■ Now you can find out everything you need to know about your Falcon just by running this handy program, there's nothing about your machine that *SysInfo* can't uncover.



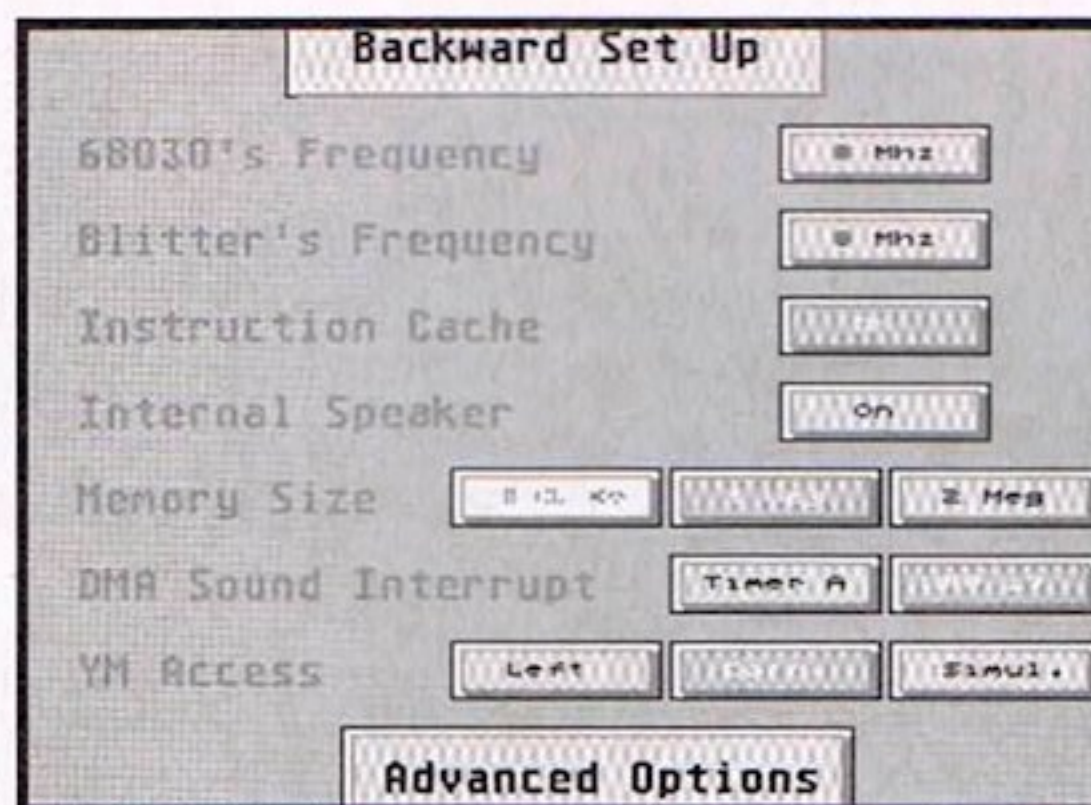
BACKWARD 2 GOODMAN INTERNATIONAL DISK GF40

ST games just don't run on the Falcon, unless you are very lucky indeed, without some sort of patch program to sort the incompatibility

problems out. *Backward 2* does just this. By entering a few simple parameters into the option boxes you can make your Falcon behave as if it's an ST, effectively crippling the Falcon's advanced video and audio hardware. Most ST games seem to adapt pretty well to running under *Backward 2*, a couple we've tried successfully are *Streetfighter 2* and *Magic Boy*. Try playing *Streetfighter 2* at an accelerated 16MHz.

STF RATING 82%

■ Select the options from this menu to brainwash your Falcon so that it thinks that it's just a plain vanilla ST, trial and error helps you find the best options for a particular game.



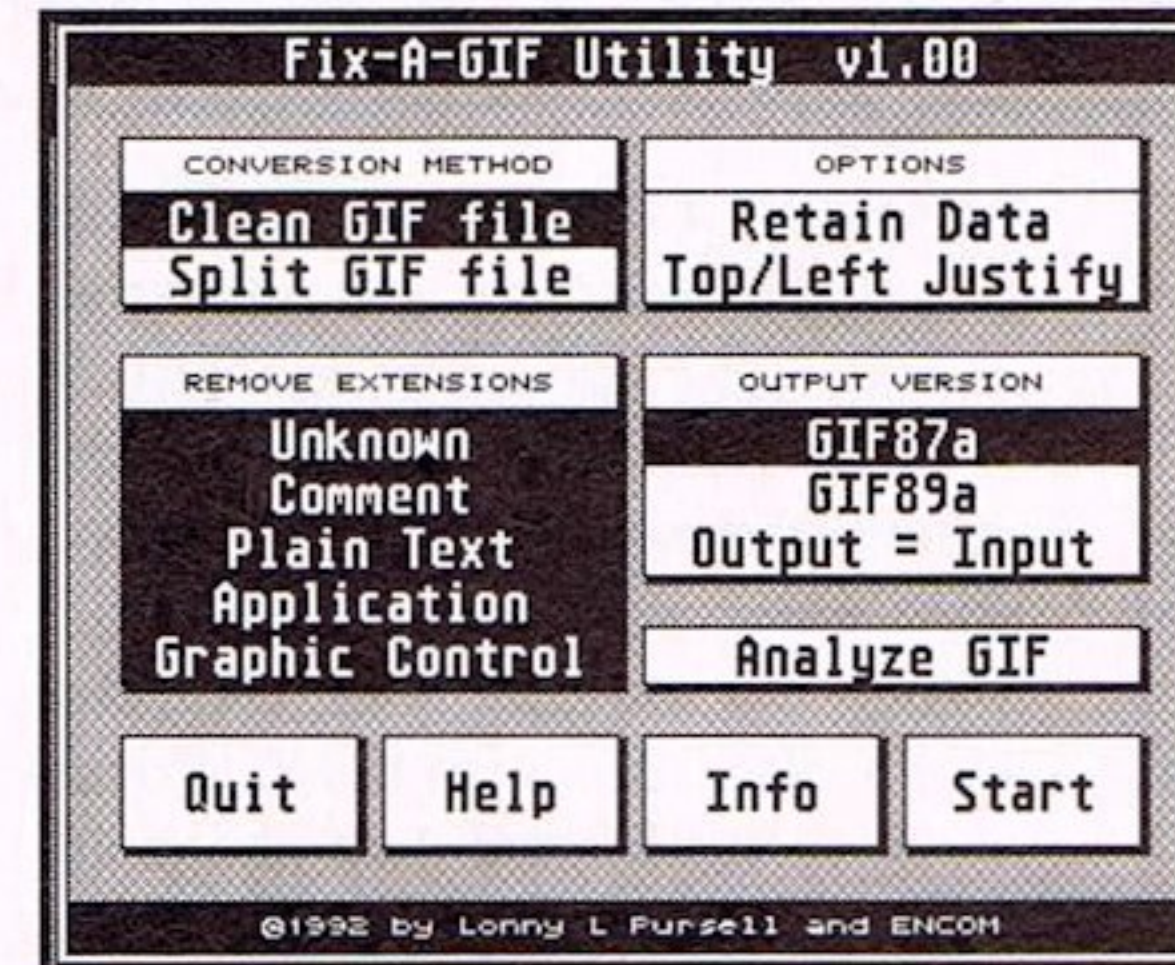
FIX-A-GIF FLOPPYSHOP DISK F3935

Fix-a-GIF is the best of the bunch on this disk bulging with advanced graphics utilities for the Falcon. *Fix-a-GIF* is designed to "clean-up" GIF

picture files that have extra data included in them such as text and other information relating to the application it was created in, for example, picture files created on the Macintosh save icon information with the picture data. Some GIFs are constructed from several images merged together, *Fix* cleverly enables you to split combined files into their original separate elements. The program works well and is easy to use, but it definitely doesn't like MultiTOS. Then again, who does?

STF RATING 84%

■ Er, you can't actually see the pictures you are working on from within *Fix-a-GIF*. Still, it all looks easy enough to use - click on Options and off you go.



ULTIMATE TRACKER 2.2 FLOPPYSHOP DISK F3962

If music be the food of love, then play on, dude. You can play sound-tracker MOD files with consummate ease on your Falcon with the *Ultimate Tracker*. A set of tape transport

controls in the main window enables all MOD files to be loaded and played, although you are restricted to the standard DMA playback speeds. There isn't anything special about this tracker interface or program apart from being able to run it as a program or a Desk Accessory, although the oscilloscope display is a great touch. The rest of the disk is packed with sound utilities, a good mix of patches and enhancements.

STF RATING 74%

■ Let your ears rock to the rhythm with the *Ultimate Tracker* on your STE, MegaSTE or Falcon. All manner of MODs can be used including *Amiga Soundtracker*, *Noisetraacker* or *Protracker 1.2* modules.



DEMOS

SID JAMES DEMO GL-PD STE ONLY DISK GL 1220B

The *Sid James Demo* knocks you for six. You know, sometimes when a demo appears which is just so unusual, innovative or just downright surreal... Sidney James, appearing on this demo, is all of these things.

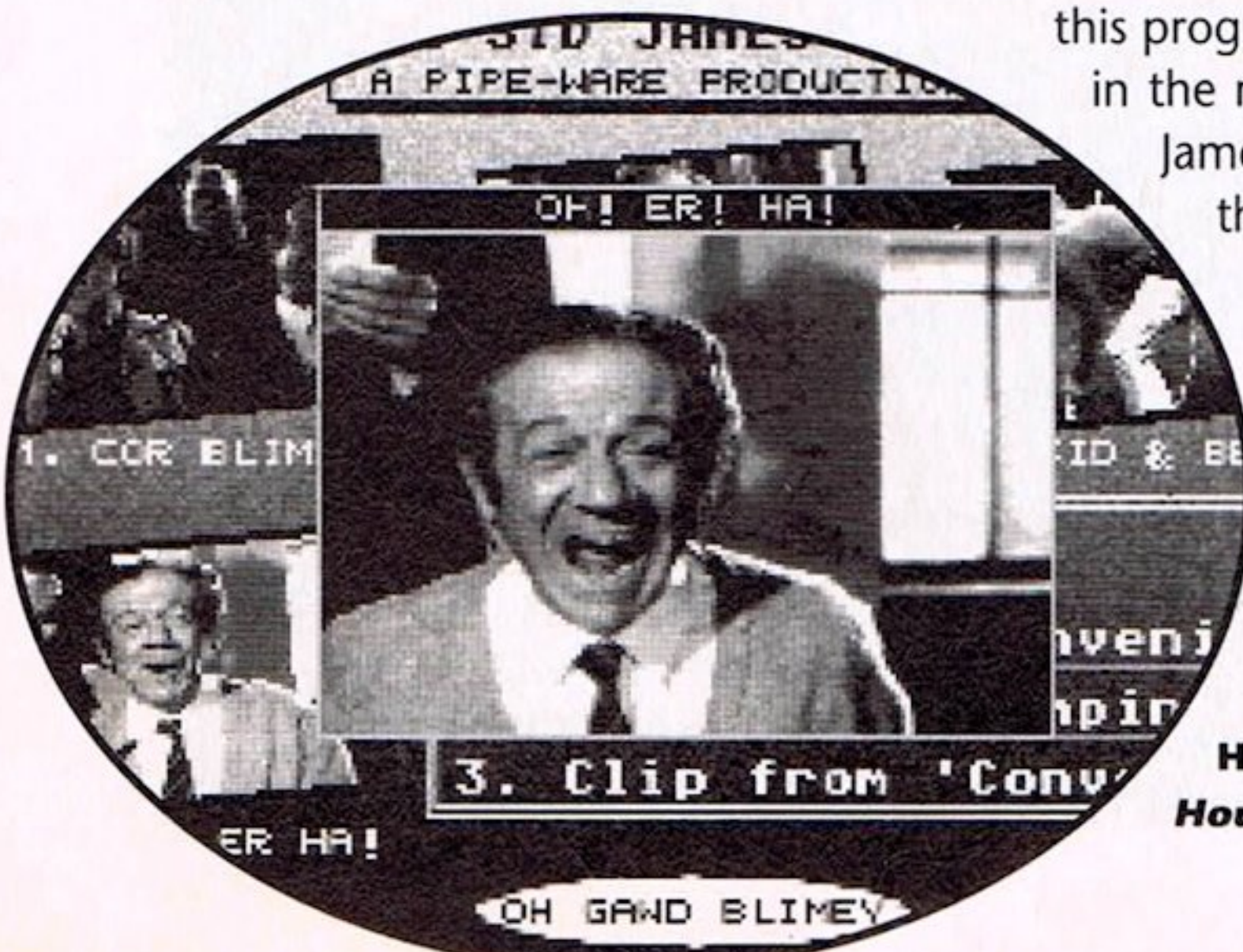
Using samples, monochrome stills and animations, the author has

assembled a shrine to the great comedy actor, with lots of clips from *Carry On* films, accompanied by sound effects - mostly the guffaw we've come to expect from Sid. The demo is well put together, using icons which you just point to and click on to access the animation you want. A good laugh all round - well worth getting.

Oh, by the way, *Sid James Demo* isn't PD, Shareware or Licenceware: it's Pipeware! Yes, if you like this program, you must smoke a pipe in the memory of the great Sidney James. A great shame, then, that this isn't commemorating Bob Marley.

STF RATING 83%

■ Bless This House, Carry On Doctor, Carry on Camping. Just some of the completely crap things Sid James was in. He was in *Hancock's Half Hour*, though. That was good.



DEMO COLLECTION FALCON OWNERS GROUP DISK GFOG 032

A collection of mini-demos, supposedly showing off the capabilities of the Falcon. The largest demo here, by New Trend, is a typical megademo with a strong but repetitive soundtrack. Lots of whirling dots, vectors and shade-blobs decorate the screen, but the chances are that you're going to have seen it all before on the STE. Ah, well; maybe next time.

The Light Demo throws a collection of vector shapes over a true colour scanned background. Normally this wouldn't be very interesting, but in this case each shape is made from several hundred dots which morph from cubes into balls,

■ This true colour raytraced pic looks rather good on-screen. It's a great oracle to all those who attended the 680 XX convention, but completely meaningless to everyone else.

then into an Atari logo. The morphing is very smooth. Also on the disk are some raytraced pics, which are reasonable but nothing special.

STF RATING 52%



UTILITIES

POLYFILM

LAPD
DISK A75

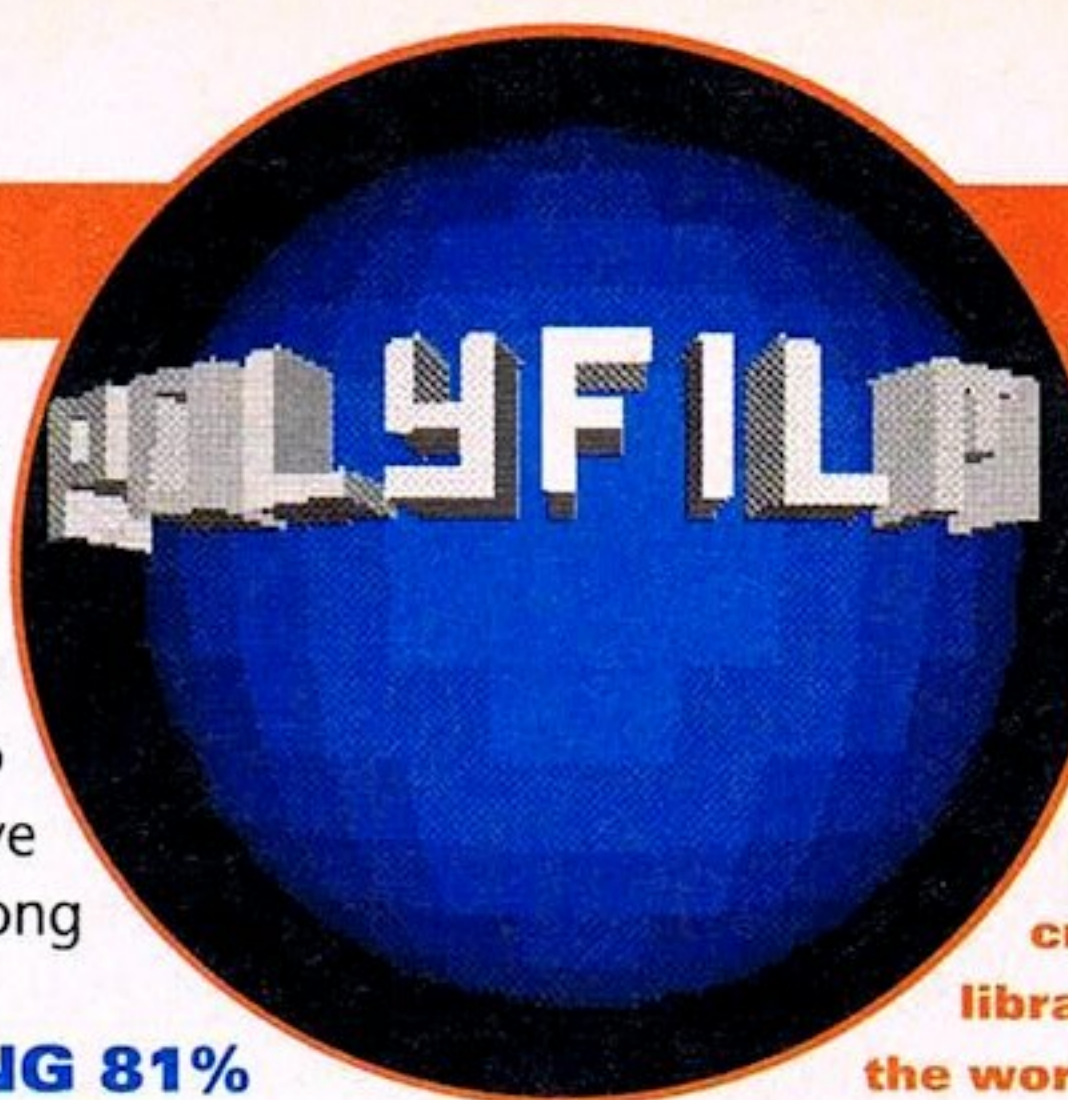
If you've ever considered creating your own animations but have never managed to get past the first stage then you need *Polyfilm*, an easy to use animation creator. Objects are cre-

ated for an animation in an editor and are used to build the individual elements of the film. All the objects are very basic - squares, triangles, spheres and lines - but by combining them you can design more complex shapes. You can add colours and surface details to shapes to give them more depth. A 3D editor screen

enables shapes to be accurately positioned in the 3D world.

Polyfilm takes a bit of getting used to but some impressive results are possible as long as you persevere.

STF RATING 81%



■ Polyfilm has its own animation player supplied so you can distribute your creations to PD libraries across the world.

HELPFUL HORRACE

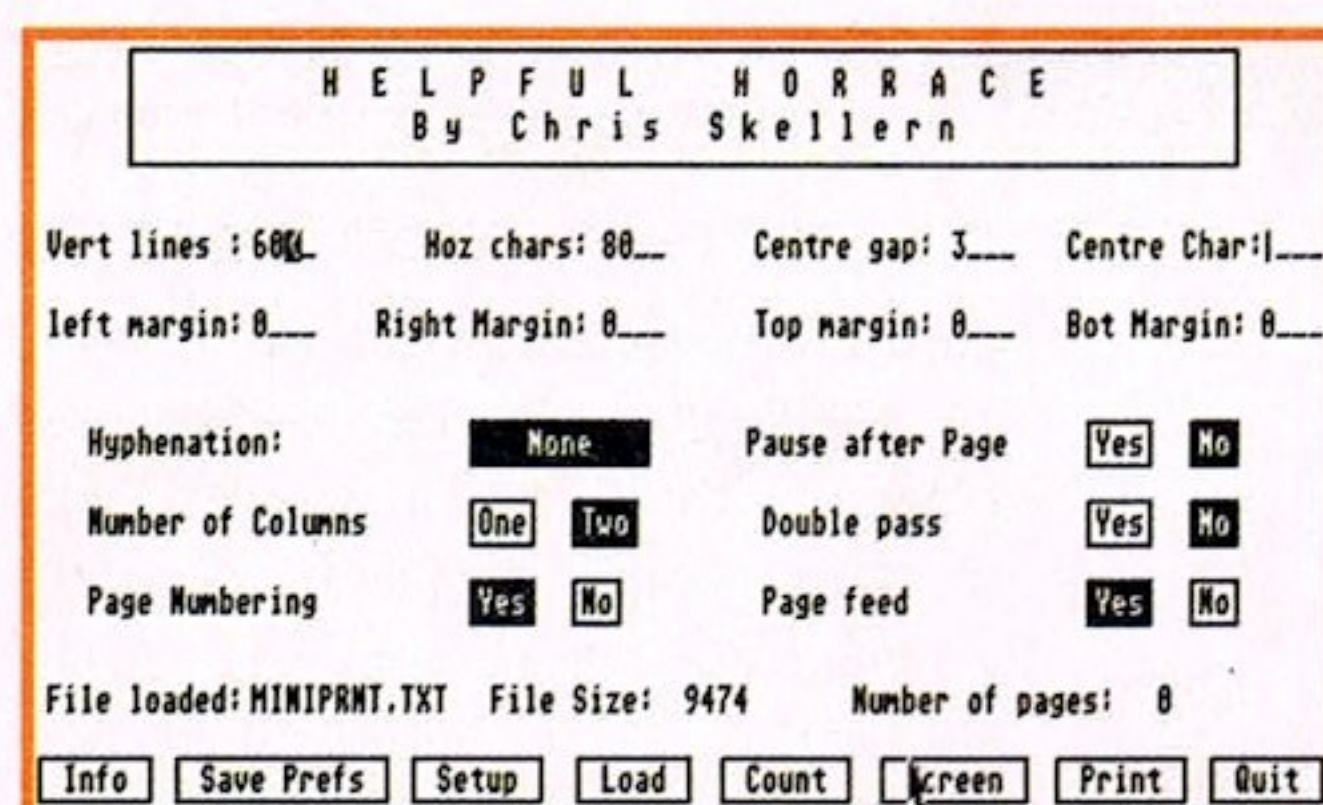
EMERALD CITY
PD DISK ST25

Helpful Horrace cleverly sorts out your text files and prints them neatly in two columns for you, he really is a clever chap. Files to be printed must

be in pure ASCII format, any formatting commands, tabs and other commands are studiously ignored by *Horrace*. He just prints the text and ignores the rest. *Horrace* can sort out your page exactly as you want it, sorting out margins, lines, characters and hyphenation with barely a pause for breath. Talk about efficient. If you have a less than average word processor then *Helpful Horrace* really is helpful.

STF RATING 68%

■ Horrace is not very exciting to look at, but he has hidden depths that are tucked away behind that plain exterior.



LUCID MORSE

LAPD
DISK M138

Dah dah dit dah dah dit dah, this is the sound of morse code burbling from your monitor speakers as you use *Lucid Morse*. *Lucid Morse* is, surprisingly, a morse code trainer written in STOS. It's not a single program

but consists of a series of small programs setting out stages which you can learn in order.

The training programs are pretty basic but they do the job, and you can add more advanced lessons on supplementary disks at a later date. The main text file is packed with hints and tips on learning morse, and if you register you get a cable for connecting a morse key to your ST. *Lucid Morse* is only an average program but it can teach you the basics of morse code.

STF RATING 64%

■ You soon scan the airwaves for morse messages just like Pete when you master morse code. Or perhaps you won't.



DISK MAGAZINES

FALCON UPDATE 2

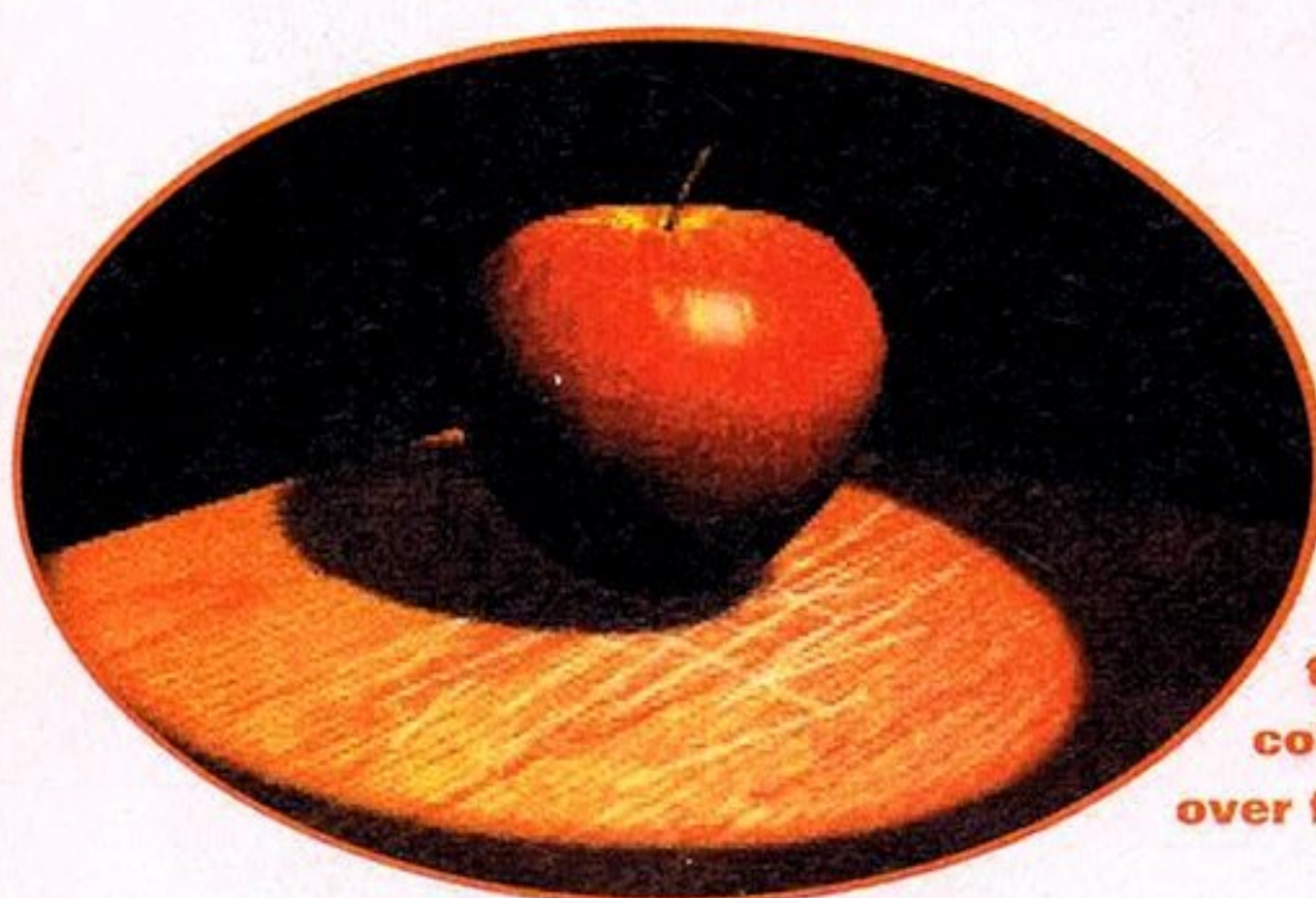
FALCON OWNERS GROUP

The second *Falcon Update* magazine from the Falcon Owners Group comes complete with a high density disk packed with goodies for your Falcon, including the latest version of *STZIP*, an FLI film player, a DSP assembler program, an *Ishar* charac-

ter editor and a bunch of ST emulation programs enabling ST software to run on your Falcon. FLI animations are short 256 colour films created on the PC, there are thousands of animations available to download from on-line services and BBSs, the Falcon can play them using the small runner program supplied without any trouble at all. Everything on the disk is almost vital software for your Falcon. The magazine supplied with the disk is a fine example of what an enthusiasts' magazine should look like, clearly designed and well written.

STF RATING 85%

■ This apple is actually bouncing manically up and down on the table trying to escape the spotlight. 256 colour animations are popping up all over for the Falcon.



STOSSER ISSUES 5 AND 6

GOODMAN INTERNATIONAL

A lively mix of *STOSSER* programming tips, reviews, jokes and info make up the *STOSSER* disk magazines, now being distributed by Goodman International. The magazine uses a menu system that uses almost every key on keyboard to switch between articles. It's well designed with the traditional jangly tune playing annoyingly in the background. Use of English throughout the diskzine is at traditional demo writers level - pretty basic - but there is a lot of useful information crammed onto these disks. Billy

■ Not too captivating at first glance, but this deceptively ordinary looking menu screen accesses the magazine articles. The contacts section is particularly helpful for beginners.

Allan is writing a Missing Link Tutorial series for *STOSSER*, this alone makes it worth buying.

STF RATING 78%



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- G. 306 LOGIC PROBLEMS II: Three more logic problems from Ben Weston.
- G. 302 Rebound: A bat & ball game requiring determination, stamina and patience!
- G. 310 DOMINOES: Playable demo version of a domino playing program.
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- G. 293 H-MEC: The ultimate Pac-Man? (1Mb, STE only).
- G. 292 CASTLE CAPERS: Superb platform arcade action across 10 screens. (1Mb).
- G. 294 ROLL-IT: Challenging German rolling-ball puzzle game. (1Mb).
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- G. 287 THE COARSE ANGLER: Angling simulation game. (1Mb).
- G. 285 KUBES: Falling block game with a novel twist.
- G. 286 ROCKFALL-SPECIAL EDITION: Tunnelling/diamond collecting puzzle game.
- G. 284 BIO-HAZARD: Two levels of brilliant Sci-fi 'Dungeonmaster/Captive' game S/W.
- G. 281 PSYCHO PIG: Platform shoot 'em up with Rambo-esque pig. (2 disks £3.00) S/W.
- G. 280 COLOUR CLASH: Adventure/Maze game with puzzles by Animalsoft. S/W.
- G. 279 OPERATION GARFIELD: Frantic 'Operation Wolf' type shoot 'em up action. (STE).
- G. 262 ALIENS! Space marines v. Aliens strategy combat game.
- G. 268 MEGALINE: 1Mb 'Tron' light cycles game for 1-4 players (STE only).
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- G. 258 GALACTIC FRUIT BOWL: Trivia Quiz meets the fruit machine (1Mb).
- G. 250 CYBERNETICS: Good, challenging 'Defender' type arcade game. S/W.
- G. 237 CHAOS: Madcap game of battling wizards by Martin Brownlow (1Mb or .5Mb).
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- G. 221 GRAV 2: Follow up to highly praised 'Oids' type rotate and thrust arcade game.
- G. 217 THE MAZE: 3D adventure game loosely based on 'The Crystal Maze' D/S.
- G. 222 GRANDAD AND THE QUEST...: 3D graphic adventure by Ian Scott. Shareware 1Mb.
- G. 80 TETRIS & PILE UP: Two very good versions of the 'Tetris' arcade game.
- G. 171 HACMAN II: 1 megabyte version of Pacman, 100 new levels! D/S.
- G. 173 PENGUINS: Move your penguins around the screen 'Lemming' fashion.
- G. 131 STAR TREK - THE GAME: Defeat the Klingon threat to the galaxy. (1Mb D/S).
- G. 10 VEGAS: Roulette, poker, blackjack and slots... without the Nevada sand!

DEMOS

- D. 371 TRAQU'N INT KET BET...: Stunning demo by Adrenalin (2 disks/£3.00 1Mb).
- D. 373 DREAMS: Dentre by Animal Mine of Holland.
- D. 372 REALITY IS A LIE: Good first demo from Psychonomix (1Mb).
- D. 374 BURNING ILLUSION: Sequentially running demo by DNT.
- D. 367 EXTREME RAGE: Sinecurves, Shadowbus, etc from Anatomica of Sweden (1Mb STE).
- D. 363 GROTESQUE: Psychedelic techno music demo (1Mb STE).
- D. 366 BIRDS OF PREY: Intro to the commercial game that never made it to the ST (1Mb). (STE only).
- D. 360 DREAMZONE: Mega-demo from the Wild Boys (2 disks £3.00)
- D. 347 COSMIC JAM: Good multi-vector demo from Imagina of Finland D/S.
- D. 324 CROSSBONES: STE demo (also known as RED SECTOR DEMO).
- D. 287 HARDCORE DANCEFLOOR: Sampled house music by the Wild Boys. D/S.
- D. 323 SLAM - HARDCORE DANCEFLOOR II - More house music by the Wild Boys.

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- S. 8 NOISETRACKER: Soundtracker .mod player with eight starter tunes.
- S. 73 BAD STARS SAMPLES #1: Over 80. SPI samples for use with Noisetracker.
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- S. 87 IMAGE FACTORY DIGI-SYNTH 1: Ripped Amiga mods with 'Lemmings' menu.
- S. 85 LONE WOLF SAMPLES: Voice and instrument samples for TCB Tracker.
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- U. 37 PREMIER PACKERS: 13 of the best program packers, plus a de-packer. D/S
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- U. 52 VAULT & TURTLE: Hard disk back-up utilities.

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- A. 1 ANI ST: Commercial quality animation program (once cost £60.00 to buy!)
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- P. 44 GFA BASIC V.2: Full version of popular language with extensive tutorial. (NB This disk is not PD - LAPD have permission to distribute it.)
- L. 23 GRAV 2 SOURCE: All the code for the top rated ST game (£5.00)
- P. 37 HEAT 'N' SERVE SOZOBON: A friendlier sort of Sozobon. D/S
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AUTHORS

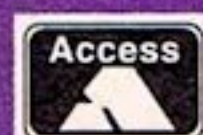
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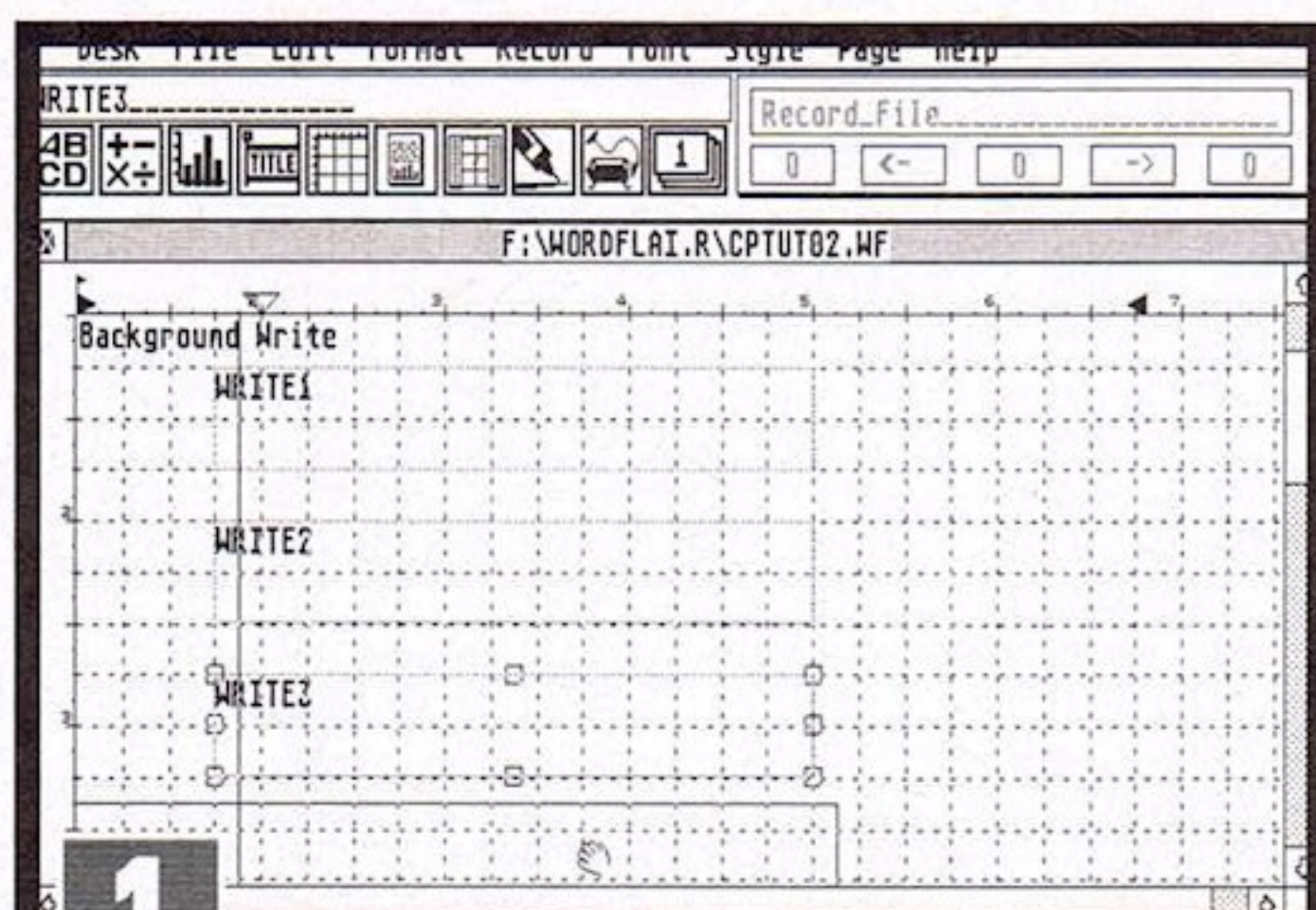


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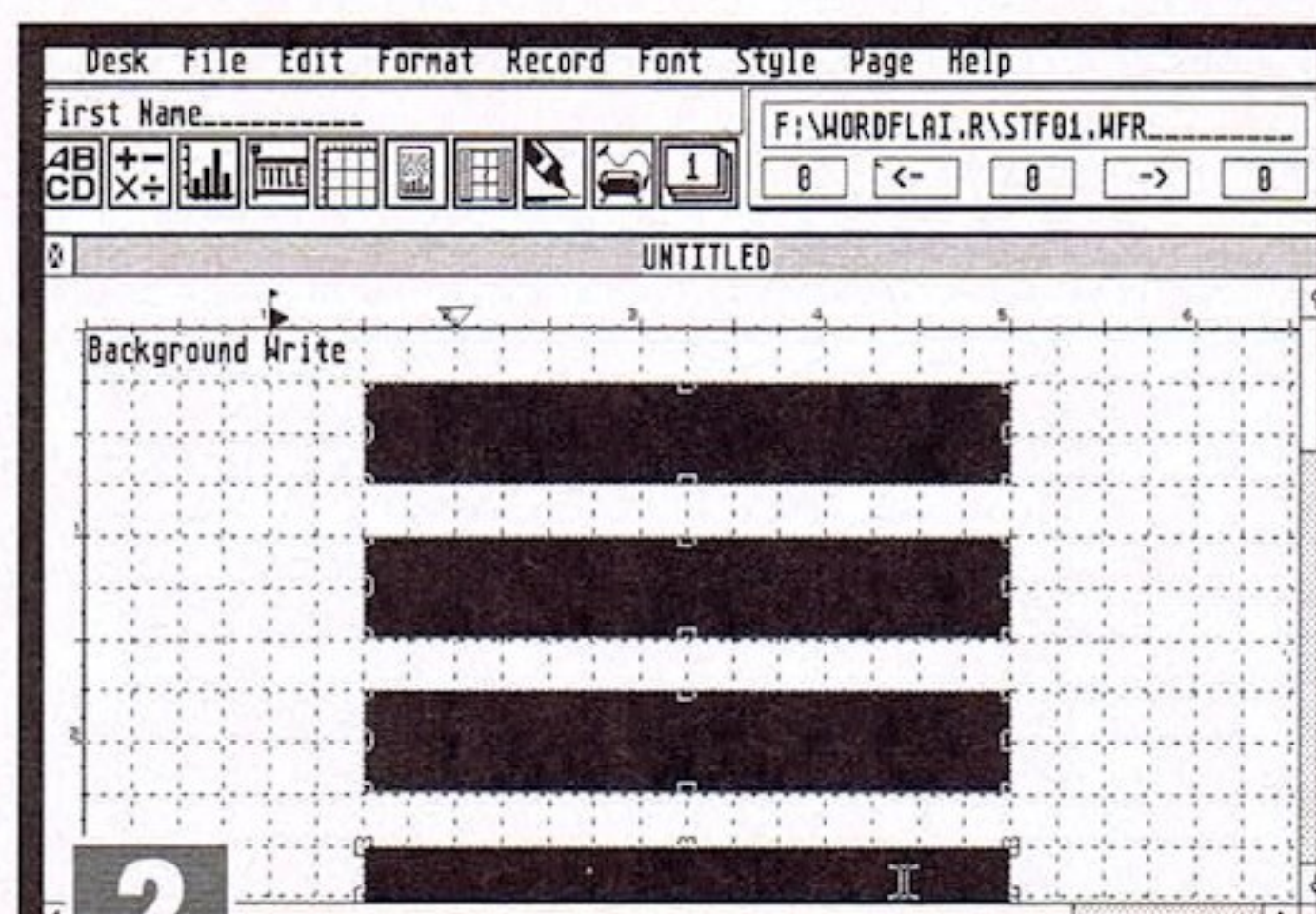




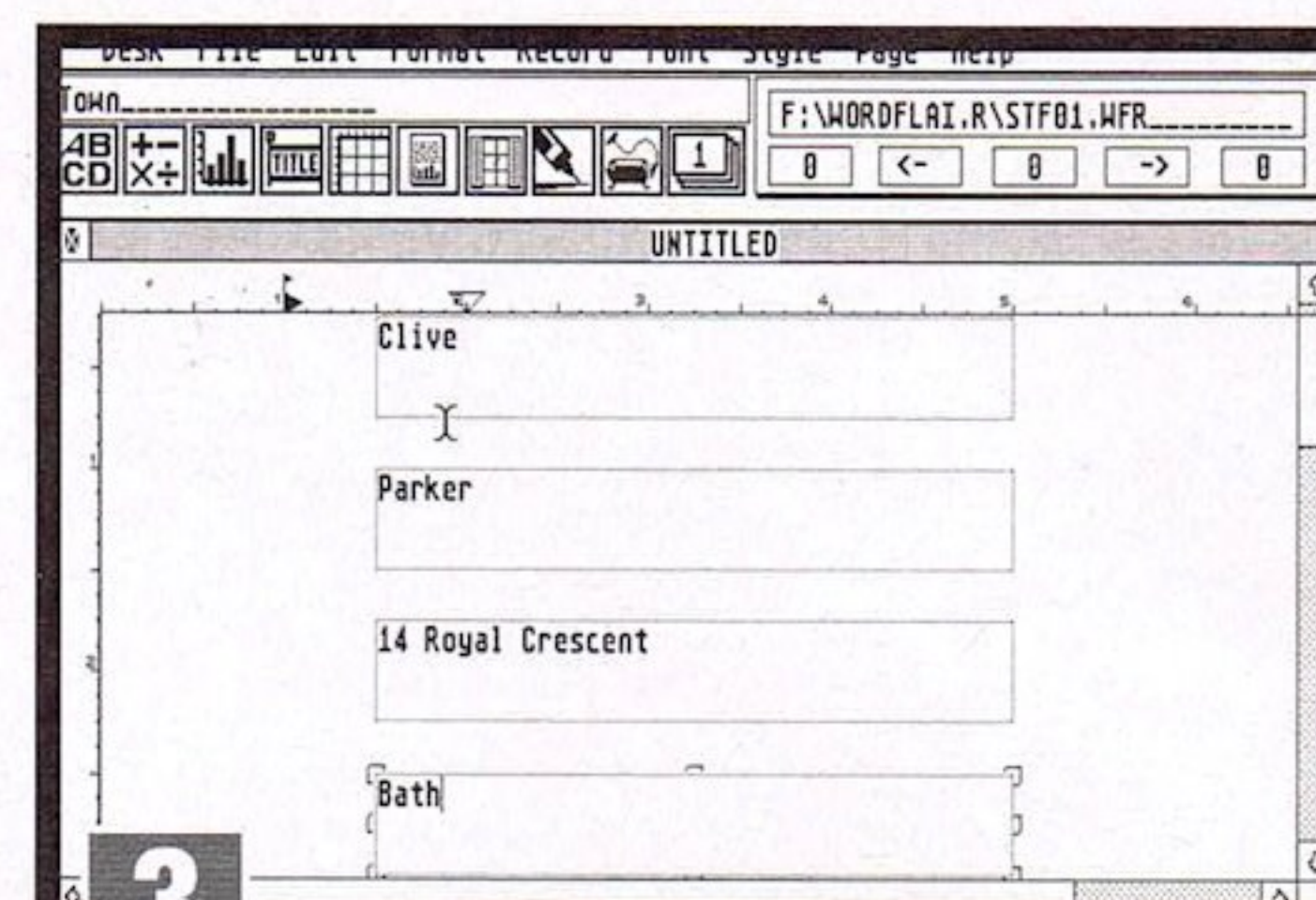
CREATE CUSTOMISED DATABASE FILES



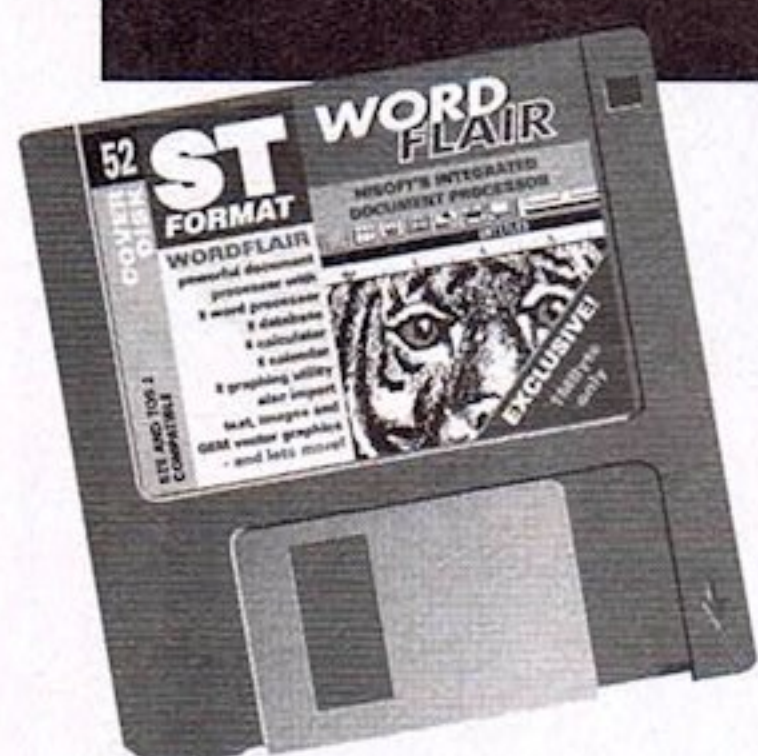
1 To start off your database you must create a template for the data, create a Write region using the Write icon and then use <Shift> and the right mouse button to make six copies of it. Each Write region can be renamed using the Setup Region option. Name the six regions, First Name, Surname, Street Address, Town, County and Postcode.



2 These are all the regions you need to start off your basic address database file. These regions now have to be converted into a Record File. Press the <Shift> key and click on each of the regions so they are highlighted, continue until you have highlighted all of the Write regions. All highlighted regions are incorporated into the Record file.



3 To create the Record file go to the Record menu and select New File, when the file selector appears enter the name of your record file as STF01. Now you can start entering the information into your Write regions, click on the first region and enter the first name of the person and then press <F1>. This takes you down to the Surname field.



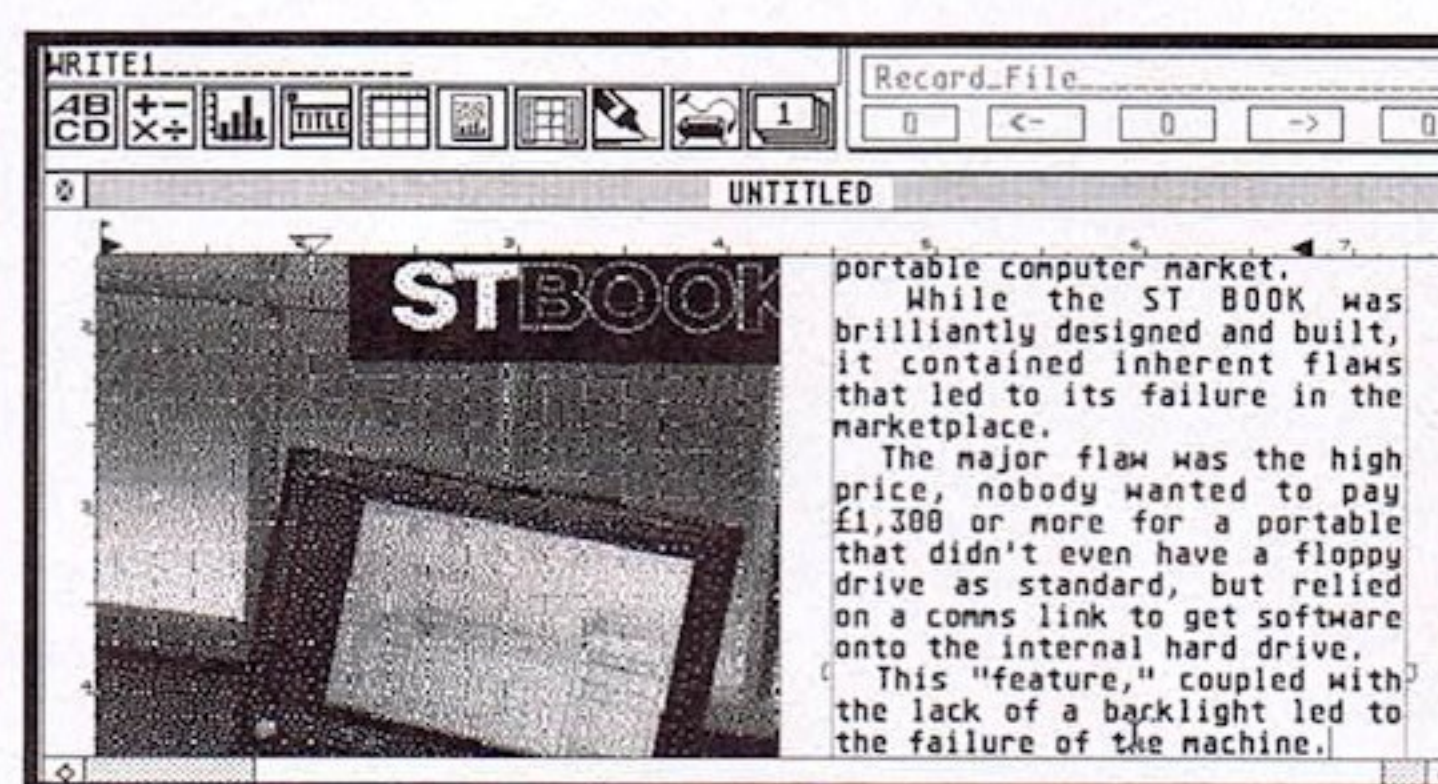
WORDFLAIR

Now you've got to grips with the basics of *Wordflair*, Clive Parker takes a look at some more advanced features

Last month we showed you the basic features of *Wordflair*, not just a word processor but a powerful integrated package enabling you to create letters, proposals, forms and technical documents. Now we look at some of the more advanced functions of *Wordflair*.

Importing graphics and text

The use of graphics within a document can completely alter its look and feel – a boring sheet of text becomes much more interesting if you include an eye-catching graphic related to the subject. *Wordflair* enables you to import



■ Creating eye-catching newsletters and leaflets soon becomes second nature. There's a vast quantity of quality high resolution photographic images and clip-art available from PD libraries and BBSs.

two kinds of pictures files, GEM Image and GEM Metafile graphics. Image files are bitmapped high resolution pictures, also known as raster files, you can spot an Image file because it has an IMG file extender. Metafiles are vector graphic pictures. The advantage of using vector graphic pictures is that they can be enlarged to any size without losing any output quality when they are printed. Metafiles normally have GEM as their file extender.

If you only have *Degas* high resolution pictures, you can convert them to Image files using the conversion program supplied on the Cover Disk with *Wordflair*. But remember, you can only view high resolution graphics on a mono monitor or by using a mono emulator, you can't view them in medium resolu-

tion. To import an IMG file into your document you have to open a graph window, exactly the same icon you use for creating graphs, click on the Graph icon and open a window on the background area to the required size. Then go to the File menu and select the Import File option, clicking on the Image File box and then on OK. There are no limitations, you can import as many images into a document as you like.

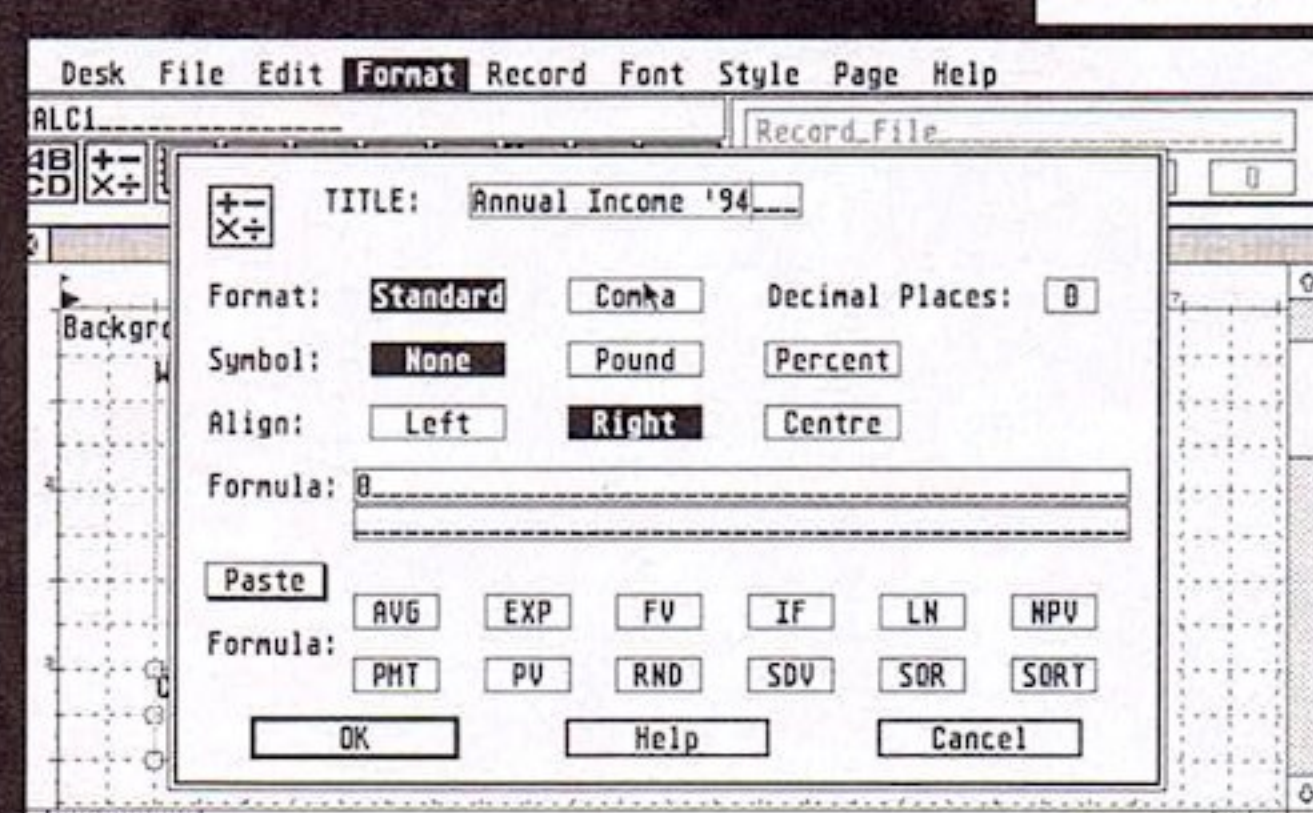
One point to note is that every time you change the document size using the Page View icon the graphic file, or files, reload from disk. This is not too much of a

REGION TITLES

Every text, graphic and calculation region can be individually titled so that you can keep track of which box does what. These titles are invisible until you click on the Titles icon in the reference bar, then they are displayed in the top left corner of the region. The titles default to the region type and number, the first text area you create is called Write1, the second Write2 and so on.

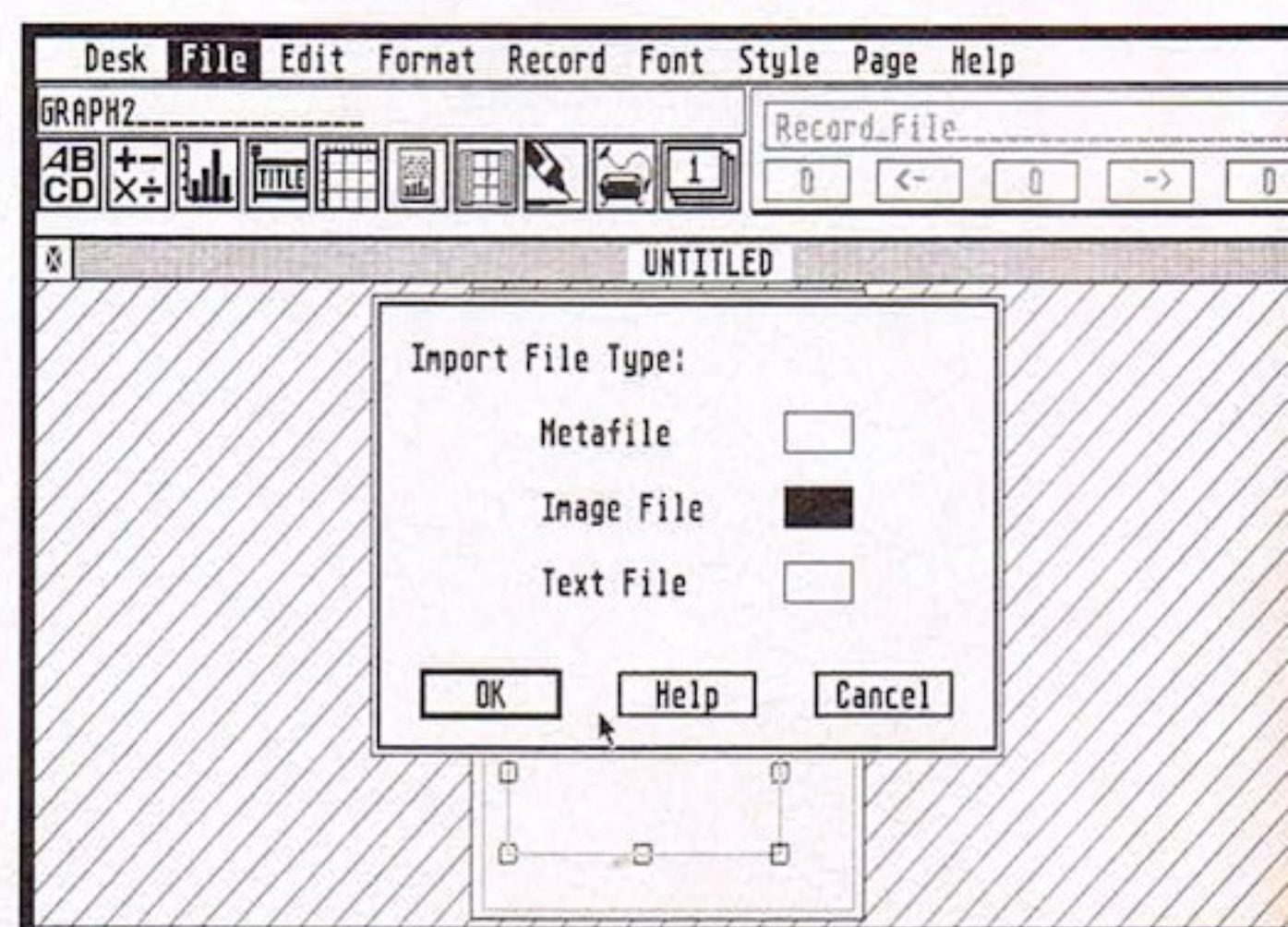
To edit the name of a region to something more relevant to the job you are doing, click on the region to select it and then select Setup Region from the Format menu. You can now edit the name of the region from the

Title field at the top of the dialog box.

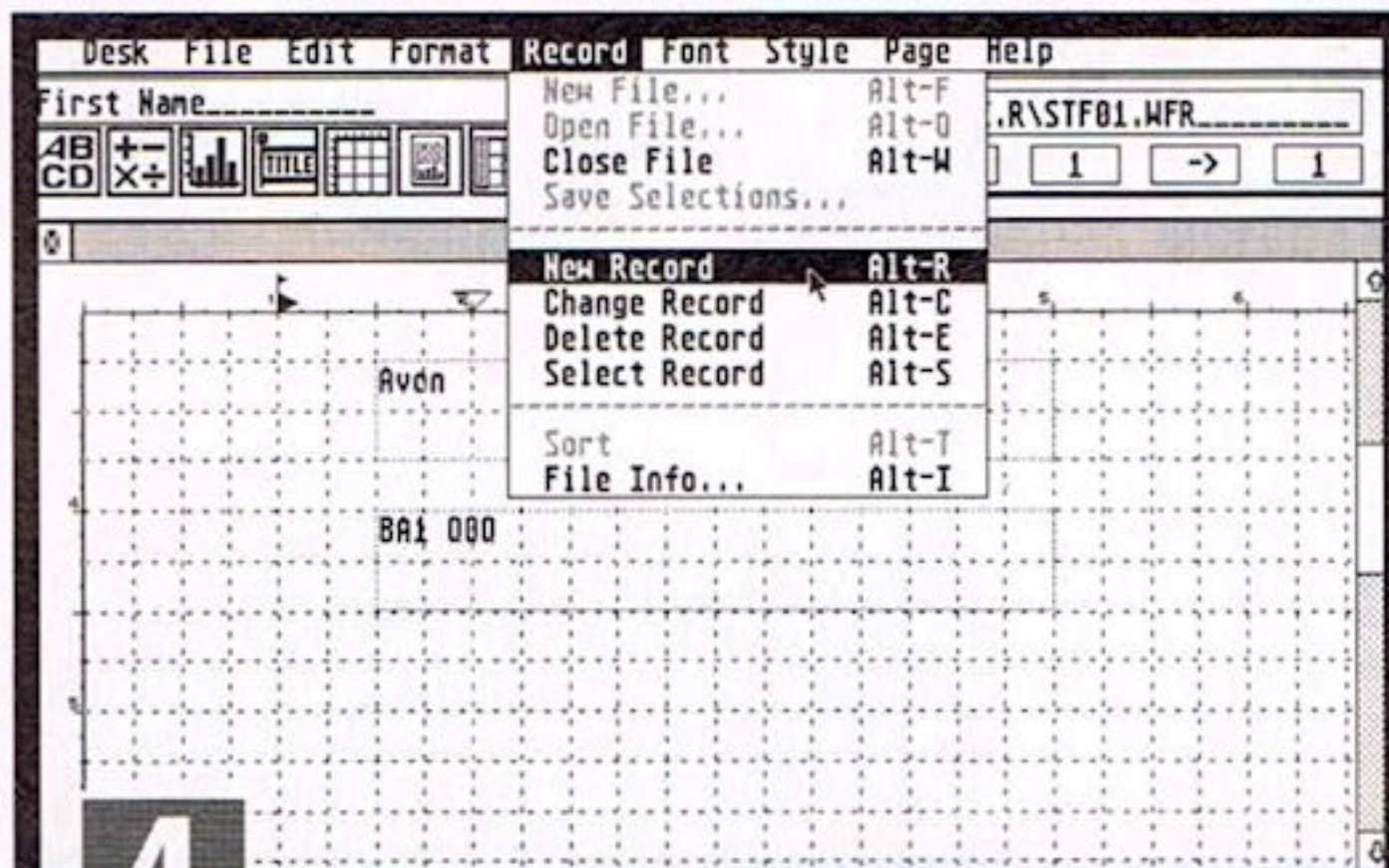


■ Customise your window names using the Setup Region dialog box selected from the Format menu, or double-click in the region you wish to rename.

■ Getting high res graphics into your documents is easy with *Wordflair*, just click on the Image File box and load your picture. If you want to load text click on the Text File box and you can import ASCII files.

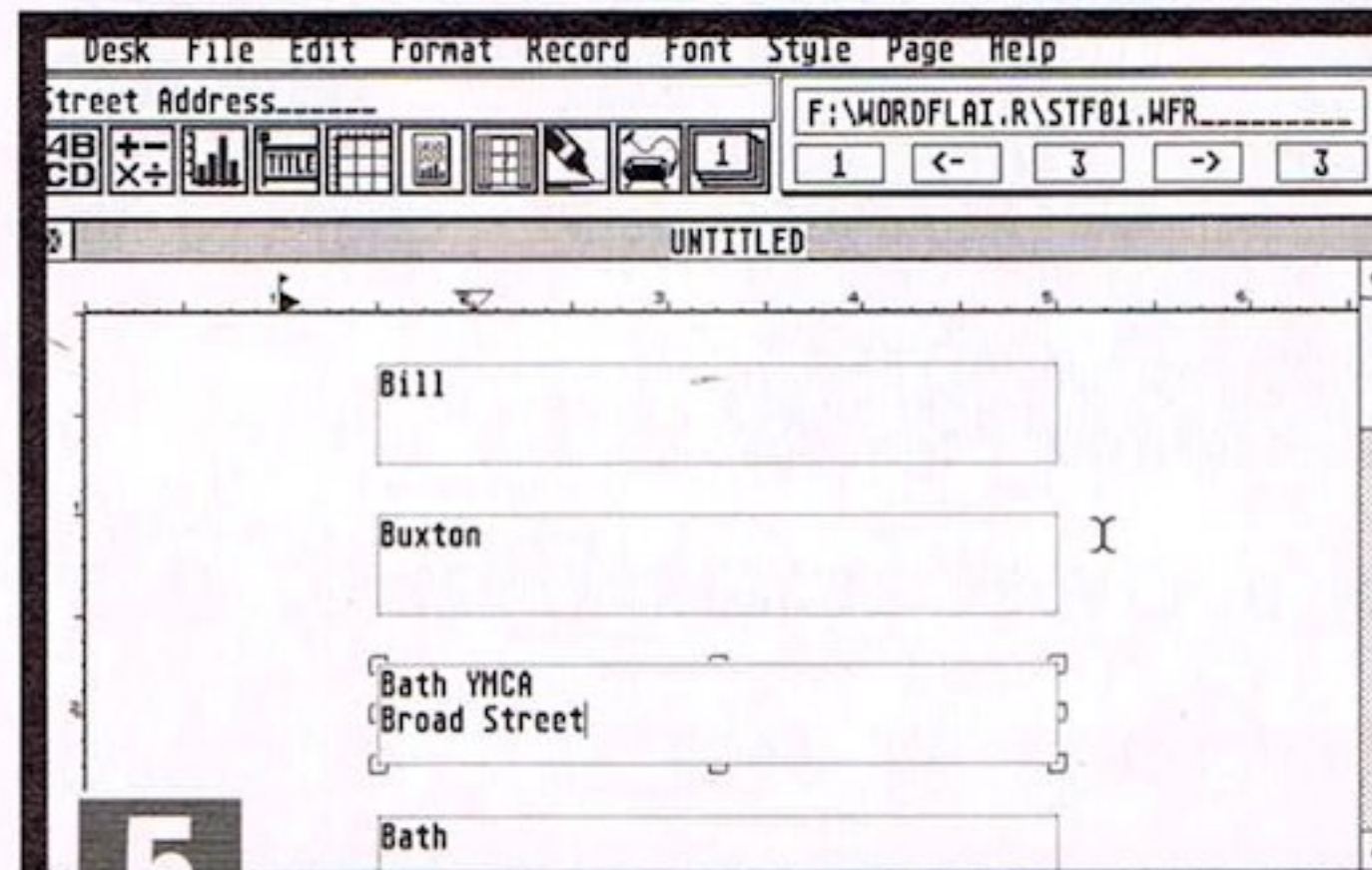


MORE ABOUT DATABASE FILES



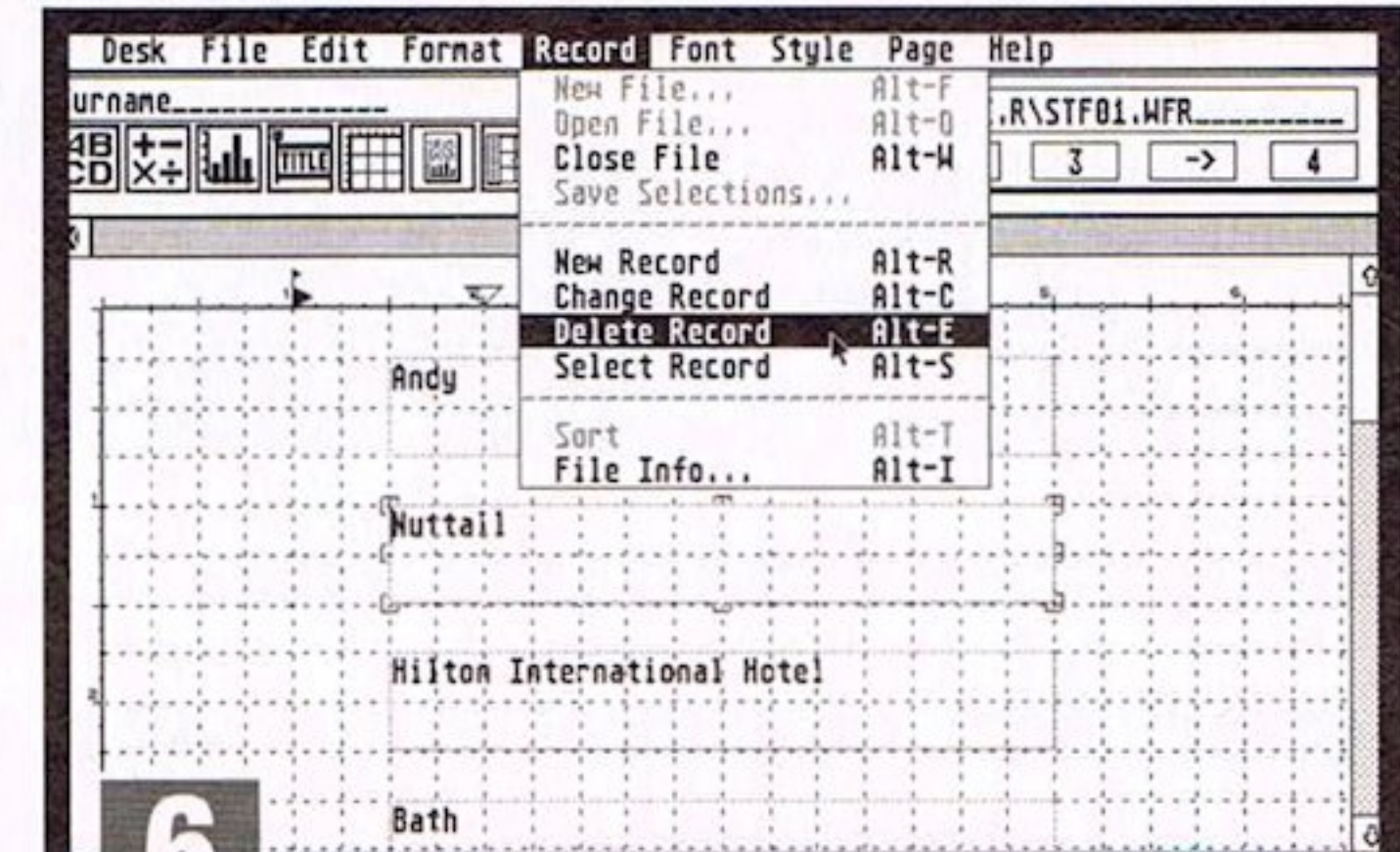
4

After you have entered the last text field go to the Record Menu and select the New Record option. This starts you on the second record in your database. To clear data from fields press <Control><Y>, and when you move down to the next field use <F2> instead of <F1>. This clears the next field when you reach it and it's ready for the new data to be entered.



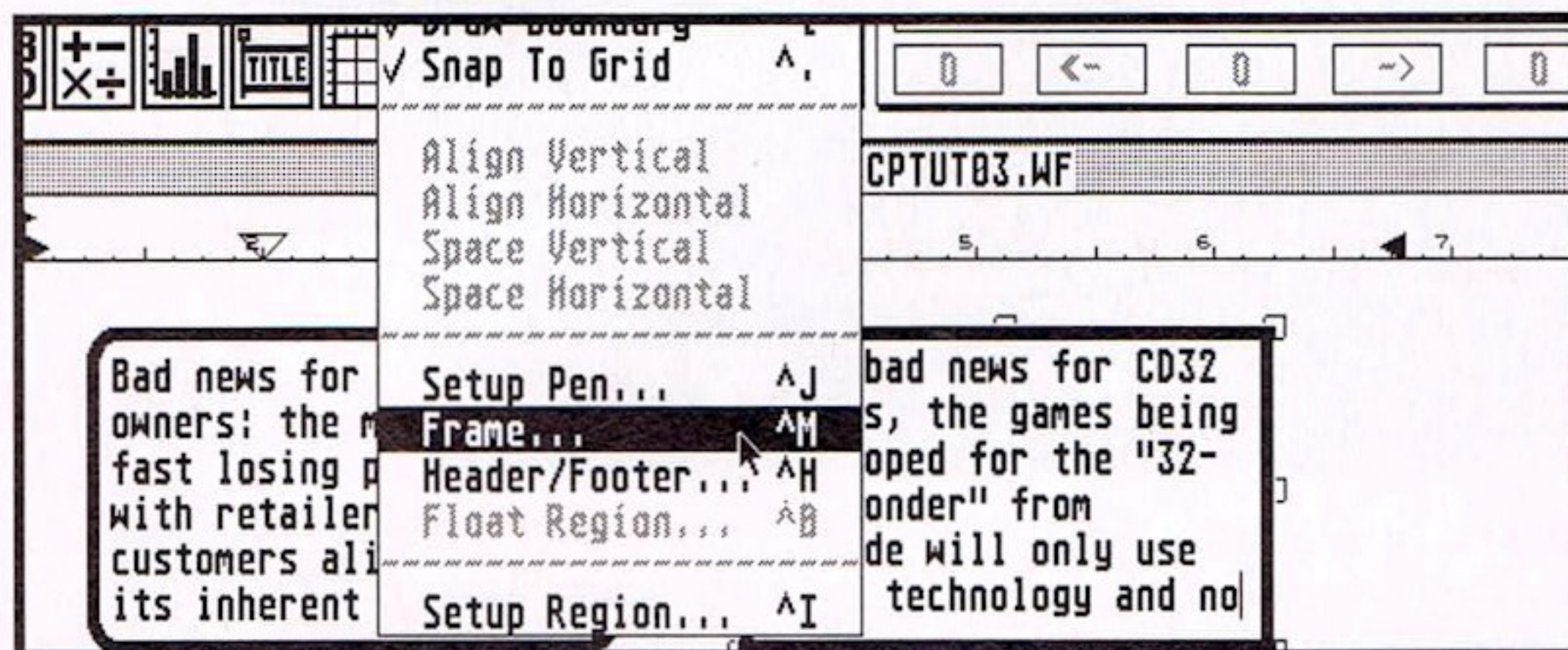
5

Carry on creating records until you are finished. You can scroll back and forth through the records using the small window above the reference bar. The first box shows the number of the first record, the middle box shows the number of the current record and the last box shows the number of the last record. The arrow boxes enable you to scroll through the records.



6

You can edit, delete and select records from the Record menu at any time. When you have finished creating your database, go to the Record menu and select the Close File option, this saves the details of any editing you have made and turns off Record mode. By doing this you are now free to create a different database or any other type of document.



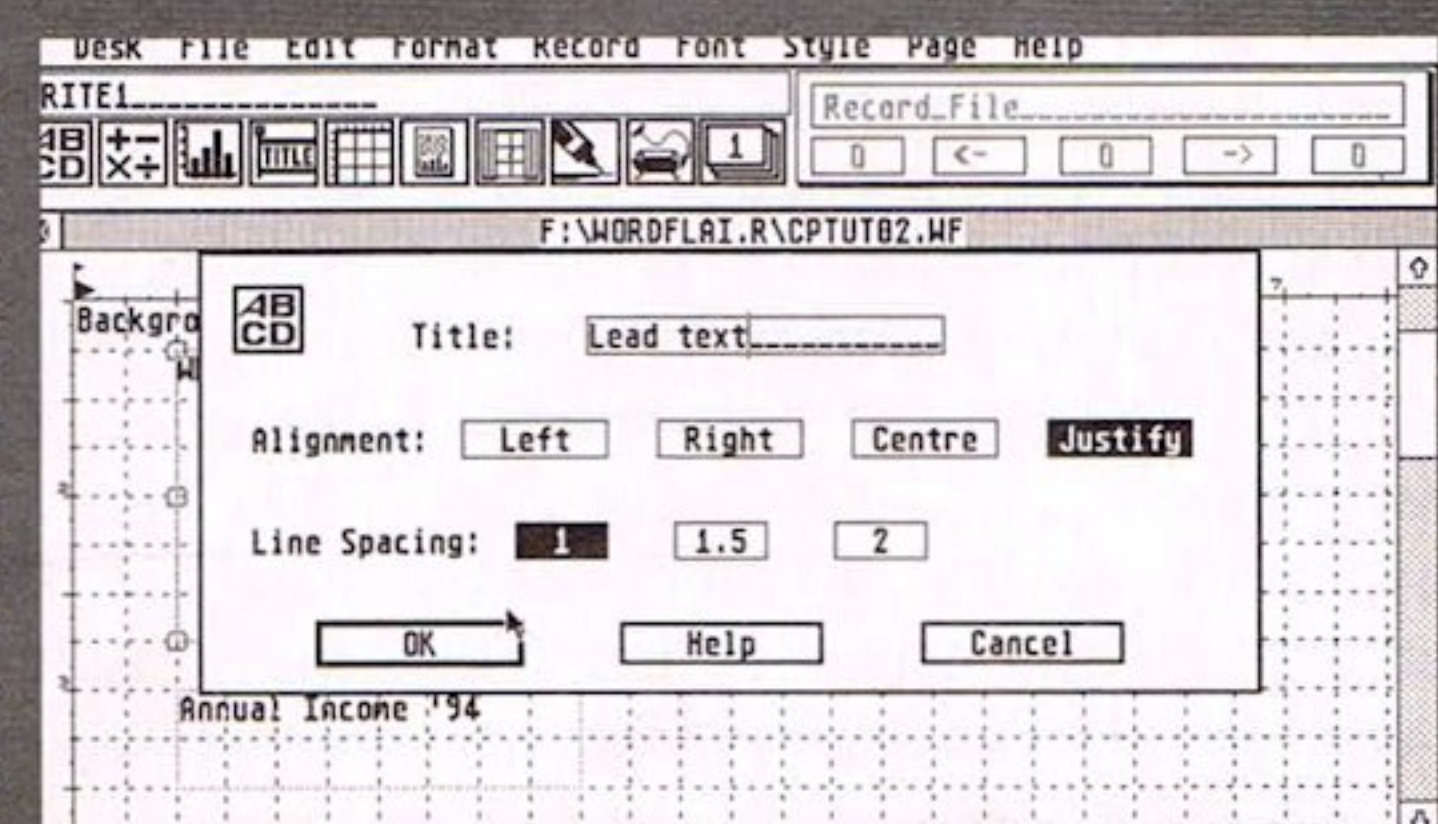
problem if you are using a hard drive but can slow things down a bit if you only have a floppy disk based system.

Remember that you can only import text or graphics into the correct type of window with the receiving window file active with its size boxes visible. **stf**

■ **Wordflair** enables you to place frames around any type of region you wish in three line thicknesses, with a choice of square or rounded corners. To do this just select the region you want to frame by clicking on it once and then select Frame from the Format menu, a dialog box appears which enables you to enter the frame parameters.

CUSTOMISING REGIONS

You can customise each region so that it works exactly as you want it to. For instance, if you wanted to set up a bar graph then you would select that option from the Setup dialog box or double-click on the region. You could select pie charts, line graphs or just leave the region empty so you can import an Image file. Remember that the same regions are used for graphics and pictures.



■ The text regions can be set up in the same way, select the text region you want to set up and open the Setup dialog. The title of the region can be defined along with the text alignment and the line spacing.

WORDFLAIR AND ARABESQUE UPGRADES

ST FORMAT have teamed up with Hisoft to bring you more amazing offers so you can make the most of both *Wordflair* and *Arabesque*.

Wordflair upgrades

■ Upgrade to the complete version of *Wordflair*, complete with *GFlair* (Hisoft's version of GDOS) and the superb easy to follow manual for just £24.95. ■ If you want to run SpeedoGDOS you need *Wordflair 2*. SpeedoGDOS gives you true font scaling for all compatible software, and a huge selection of printer drivers so you can print documents out as they appear on-screen. *Wordflair 2* costs £34.95 and *Wordflair 2* with SpeedoGDOS costs £59.95.

Arabesque and Convector offers

■ Upgrade to the complete version of *Arabesque* including the manual and Hisoft's Silver Support service (worth £19.95 and including a life-time's technical support, a regular newsletter and access to Hisoft's closed user support area on Cix) for just £39.95 ■ Save £60 on the price of the vector graphics auto tracer *Convector Professional* reviewed in *STF 46* – usually costs £99.95 and you can get it for just £39.95 ■ Or get both *Arabesque* with Silver Support and *Convector* for £69.95.

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PLEASE NOTE THAT THIS OFFER ENDS ON 31 JANUARY 1994

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THIS OFFER ENDS ON 31 JANUARY 1994



FALCON



■ *Llamazap*, the game to separate the girls from the boys, and the men from the, er, llamas. No, that's not right.

So the Falcon isn't a games machine, eh? It seems Atari are marketing it as a "niche" computer because of its high-end capabilities, but a cynic would say that they're not plugging it as a games computer because it's too expensive. Shock, horror...

A couple of years ago the ST entertainment market was thriving, with games being released left, right and upwards. Now it seems to be reliant upon budget games, with only a handful of software houses developing new products. What happened? Four million STs, that's how many there are, so there's certainly no shortage of games-buyers. Piracy is obviously a contributor to its downfall; but sadly the main cause of the ST

games market downfall is that the ST is just not fashionable anymore. It's a great and capable machine, as we all know, but developers just seem to have lost interest.

From this experience, Atari are marketing the Falcon as a high-end graphics/music/multi-media monster; a role into which it undoubtedly fits. But are they selling their baby short? Well, yes, they are, really. After all, people who buy a computer don't necessarily want to use it for one pur-



pose. Take a peek into most ST-equipped music studios, and afterwards you invariably find



■ Whoever said that the Falcon is no good for games? Not us, that's for sure - just take a look at these graphics and wait till you see them move...

musicians playing *Gunship* or *Rainbow Islands*. Equally, today's game-players are tomorrow's high-

LLAMAZAP

ATARI/LLAMASOFT
REVIEWED STF 51

Jeff Minter, fabled programmer of *Llamatron*, *Revenge of the Mutant Camels* and *Defender 2* for the ST, finally gets his mitts on a Falcon with *Llamazap* as the result.

This is the first true Falcon game, because the other four games below are all upgraded versions of existing ST games. That

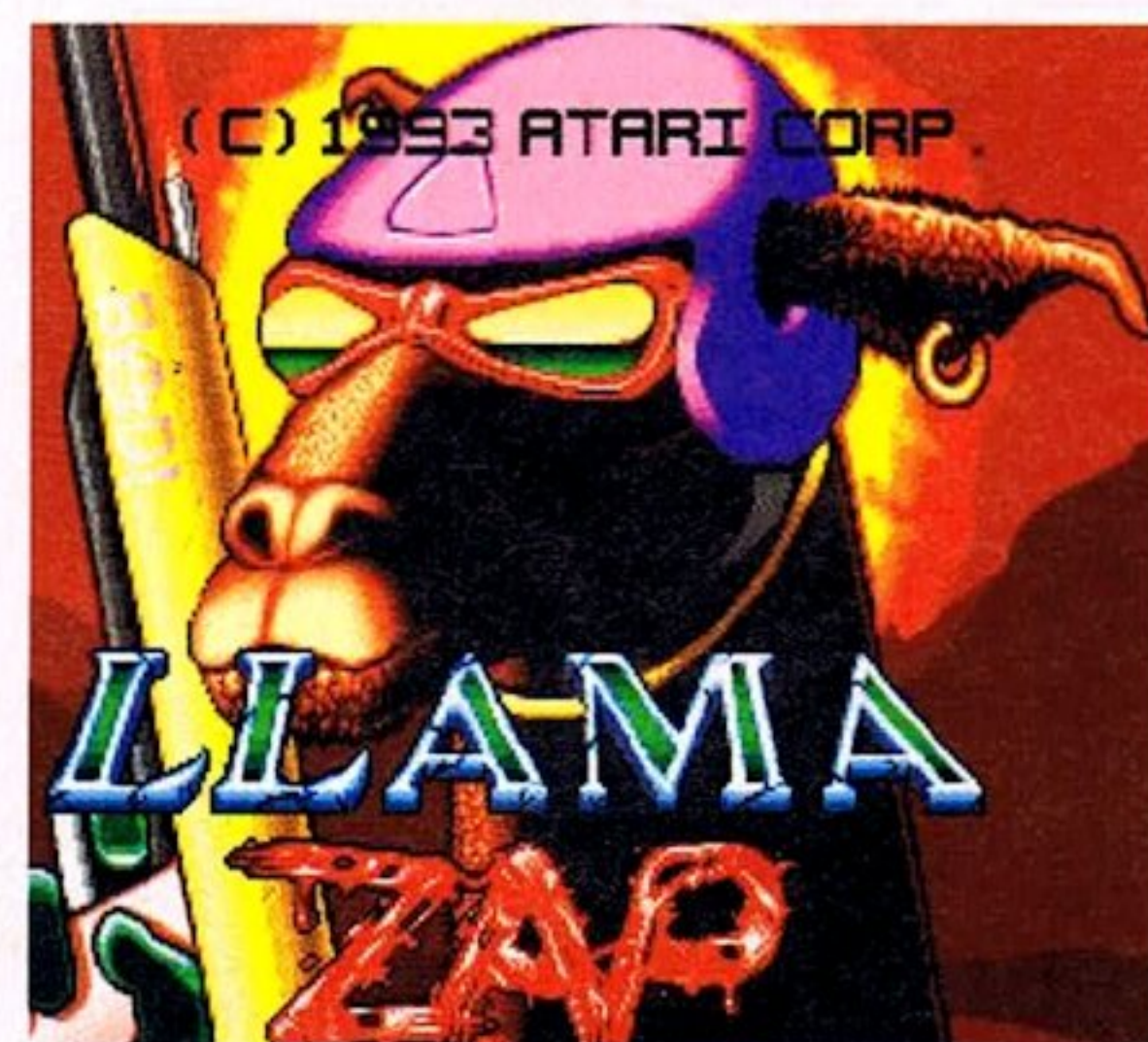
Llamazap is weird comes as no surprise to *Llamasoft* fans, but it seems that Minter's gone completely ape-crazy with his ideas this time. The main nasties include homing cows, killer sheep and giant mutant fish from hell; and the game takes you to a sub-atomic level, above a planet's surface, outer space and inside a honeycomb. There are elements of *Defender* here, but this is a shoot-'em-up for real shoot-'em-up fans - Sunday drivers won't last five min-

utes. It's colourful, it's fast, it's imaginative and playable - but most of all, it's a standard by which all other shoot-'em-ups are going to be judged.

Yeah, that's a cliché, but play *Llamazap* and then tell us we're wrong. Worth buying a Falcon for.

STF RATING: 91%

■ Right, let's try again. Ahem. "*Llamazap*, the game to sort the men from the boys. And llamas. Doh!"
© Crap Captions R Us 1993.

ISHAR:
LEGEND OF THE
FORTRESSDAZE MARKETING/SILMARILS
REVIEWED STF 47,

This is more like it. *Ishar* is widely considered to be one of the best



role-playing games on the ST, and this Falcon version improves on the graphics and sound making it an even better experience.

The difference between this and the Falcon version of *Transarctica* is that *Ishar*'s a stupendously large game for the ST, which is rich and varied in experiences and graphics. No sign of a dull moment here; so a direct port of the ST's gameplay over to the Falcon is more acceptable.

If you're into RPGs with colourful

■ "Oi! What was that you said about my mate wearing a nappy?"



■ Urgh. This horrible beast looks pretty menacing, doesn't he? Wouldn't fancy meeting him in a dark alley. Especially when he's wearing those fetching Kotex pants. They're curved for extra protection - and why not? After all, large monsters are...

storylines, *Ishar*'s got one of the best. Evil Krogh has unleashed the "forces of darkness" upon your kingdom, an action which is considered by your people as somewhat unfriendly, and you've been chosen to beat him

off. One great advantage of Falcon *Ishar* over the ST is in terms of speed - you find that moving around the landscape is a lot quicker and easier.

However, although this does improve the game, this has to be because of the speed of the Falcon rather than clever programming.

STF RATING: 82%

GAMES

AVAILABLE SOON

EVOLUTION DINO DUDES

IMAGITEC/ATARI

Otherwise known as *Humans*, *Dudes* are stuck in Lemming-like situations and need rescuing.

■ The *Humans* re-incarnated as *Dino Dudes*.



RAIDEN

IMAGITEC/ATARI

Conversion of the smash-hit coin-op shoot-'em-up. Nearly complete, and it looks promising.



■ Even the test graphics for *Raiden* look good - it plays brilliantly, too.

Coming attractions...

Mini F1	BA Info
Swap Tiles 2	Parx
Black Sect	Lankhor
Oxyd	Dangleware

Road Riot 4WD	Atari
Steel Talons	Atari
Yuppies Land	Euro-soft
Sukiya	Lankhor
Tornado	Digital Integration

Way, way, way in the future...

Alone in the Dark	Infogrames
AV8B Harrier	Domark
Cyber Assault	Koveos
Unknown Ocean	Excelsior

And finally...

SPACE JUNK

IMAGITEC/ATARI
The long-awaited space epic from Imagitec. They promised it months ago, but they're having trouble cramming so much in... so they say. Looks promising, but we're reserving judgement.

VROOM 2 LANKHOR

Is it or isn't it? Soon to be released as *F1* on the ST in the UK (damn, these mnemonics), Atari lists the Falcon version as available now in France. Lankhor say "there won't not be anything for the Falcon." So it's up to you - who do you believe?

ISHAR 2

DAZE MARKETING/
SILMARILS

REVIEWED STF 52

Can you tell what this is yet? Traditionally, sequels have a tendency to be disappointing compared to the originals, but in *Ishar's* case the sequel is much better.

The graphics are colourful and well-drawn, the sound effects create a brilliant atmosphere, and

the eight-track music shows off the Falcon's sample playing ability.

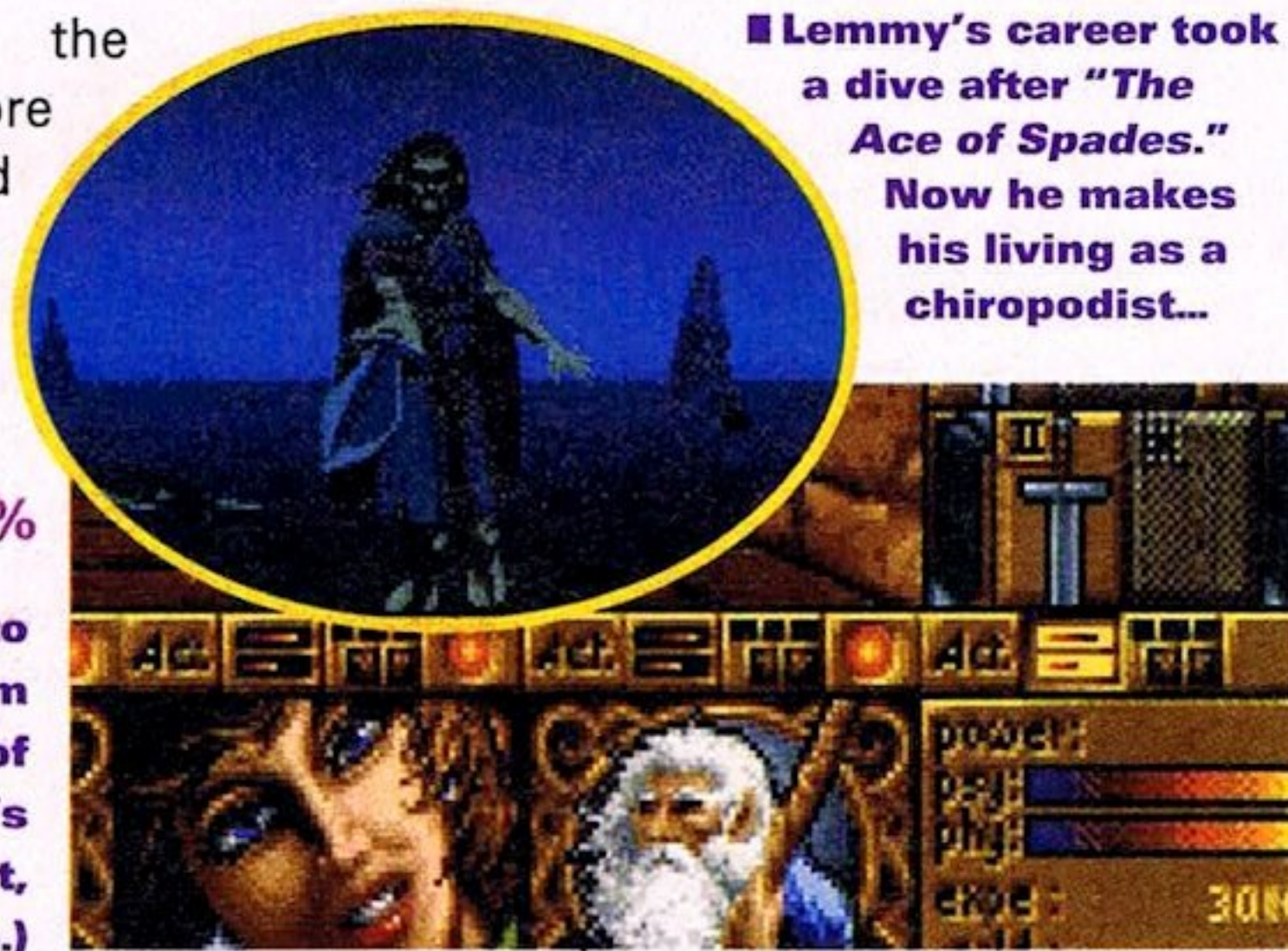
The gameplay is much the same, so if you've played the original there are no real surprises except for a few neat additions such as a location map of the land. This feature is particularly useful because each area of the game is absolutely huge, and there are 14 different areas to explore.

One downer, though, is that each area of the game must be completed before moving on to the

next, which makes the gameplay a little more linear than it should be. Still, the waves of appreciation which went to *Ishar* go to *Ishar 2*. Superb.

STF RATING: 90%

■ In *Ishar 2*, you get to choose your team from a travelling band of brave warriors. (That's not including the old git, of course.)



■ Lemmy's career took a dive after "The Ace of Spades." Now he makes his living as a chiropodist...

NO SECOND PRIZE

THALION
REVIEWED STF 48

Racing games are nearly always the same. Lots of jerky little cars wobbling around a supposed 3D track, trying hard to recreate the atmosphere of a racing circuit and failing miserably.

Occasionally we see a game arrive on the ST which really is good, and goes some way to improving the genre - *Vroom* did it a couple of years ago, with its speed and exhilarating action; and

more recently *Formula One Grand Prix* from MicroProse stunned everyone with its sheer realism. We don't get many motorbike racing games though, so *No Second Prize* on the ST came as a bit of a surprise because it's very good.

Riding motorbikes at high speeds around a track is much more difficult than driving a car, which is a good job because controlling your bike in *Prize* is bloody difficult. This is compounded in the Falcon version because it's a lot quicker than on the ST, but again once you've played it for half an hour you get the hang - and then it becomes brilliant. 'Nuff said.

STF RATING: 71%

■ Thanks to the remote helicopter view, you can keep an eye on the leaders while you bring up the rear.



TRANSARCTICA

DAZE MARKETING/SILMARILS
REVIEWED STF 48

Trains. Nuclear winter. Trains. Barren, frozen wastelands. Trains. Trading in woolly mammoths. Trains. Gangs of railway-hogging bandits intent on your demise. Trains. Trains. Trains.

That, in essence, is *Transarctica*. The railway is the only means of transport after a nuclear accident, and luckily you're given a train to shunt about goods to trade with other survivors. In an *Alien*-style scenario, the aforementioned gangs try to rob you, pillage your train and generally give you a bit of a headache.

The idea is to kill all your enemies, make money by trading, and keep your train on the move by



■ In the Arctic, everyone has a pet, it seems. Must be hell to feed.

stoking the engine's boiler with coal. The original ST version scored a respectable 79%. Although this Falcon version improves the sound effects and graphics greatly, it doesn't improve the gameplay - and this is really where the improvement is necessary. *Transarctica* is a huge strategy game which takes months to complete, but moving trains about and killing people gets a bit dull after a while.

STF RATING: 62%

ST ANSWERS

A brilliant MIDI tip takes the cash prize this month, while Clive Parker and his team of experts pore over the rest of your problems

THE STF ADDRESS

Send all your ST related problems to ST Answers, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW. Please indicate the type of problem on the envelope.

BEGINNERS



If you have bought your ST recently and you're not quite sure about which bit goes where, you need help.

COMMS



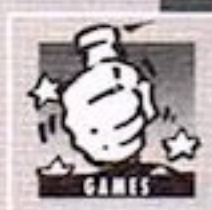
Communication is the buzz word for the '90s and is becoming a buzz word for ST Answers. Check it out here.

DISKS



Floppy disks spin at incredibly high speeds, so something's bound to go wrong with them at some stage.

GAMES



If cheating at games is your thing (tut, tut) you're better off turning to page 46 for Gamebusters.

GRAPHICS



Having a few problems with your graphics package? And you're not quite sure where to turn to. Well, look no further.

HARD DRIVES



It's hard, very fast and can store a hell of a lot of data. Sometimes though, it causes unsolicited errors.

PRINTERS



Using a printer is the easiest thing in the world... until your paper gets chewed and big black blobs start appearing.

PROGRAMMING



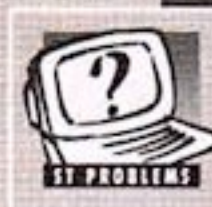
Whatever language you use, at ST FORMAT we have the experts to tackle your particular programming nightmare.

SOUND



You're lost in music, no turning back... and all that Sister Sledge stuff. Look for this logo if you're into sounds.

ST PROBLEMS



If you're not quite sure what your looking for, or not quite sure what your problem is, look out for this logo.

Bookworm



I have been trying to get a copy of Atari ST Internals by Abacus but I have just found out that it is out of print. Do you know where I can find a copy?

Ian Richards, London SE12

stf: We confirmed with Computer Manuals that the book has gone out of print and that Abacus no longer have any copies either. Advertising in a computer trade magazine for a second hand copy, or searching second-hand bookshops is your only hope. Alternatively, if someone has a copy of the book they no longer need then send it to ST FORMAT and we can pass it on to Ian.

Which printer?



Which colour printer would you recommend for use with Spectrum 512/4096 pictures?

Neil O'Rourke, Eire

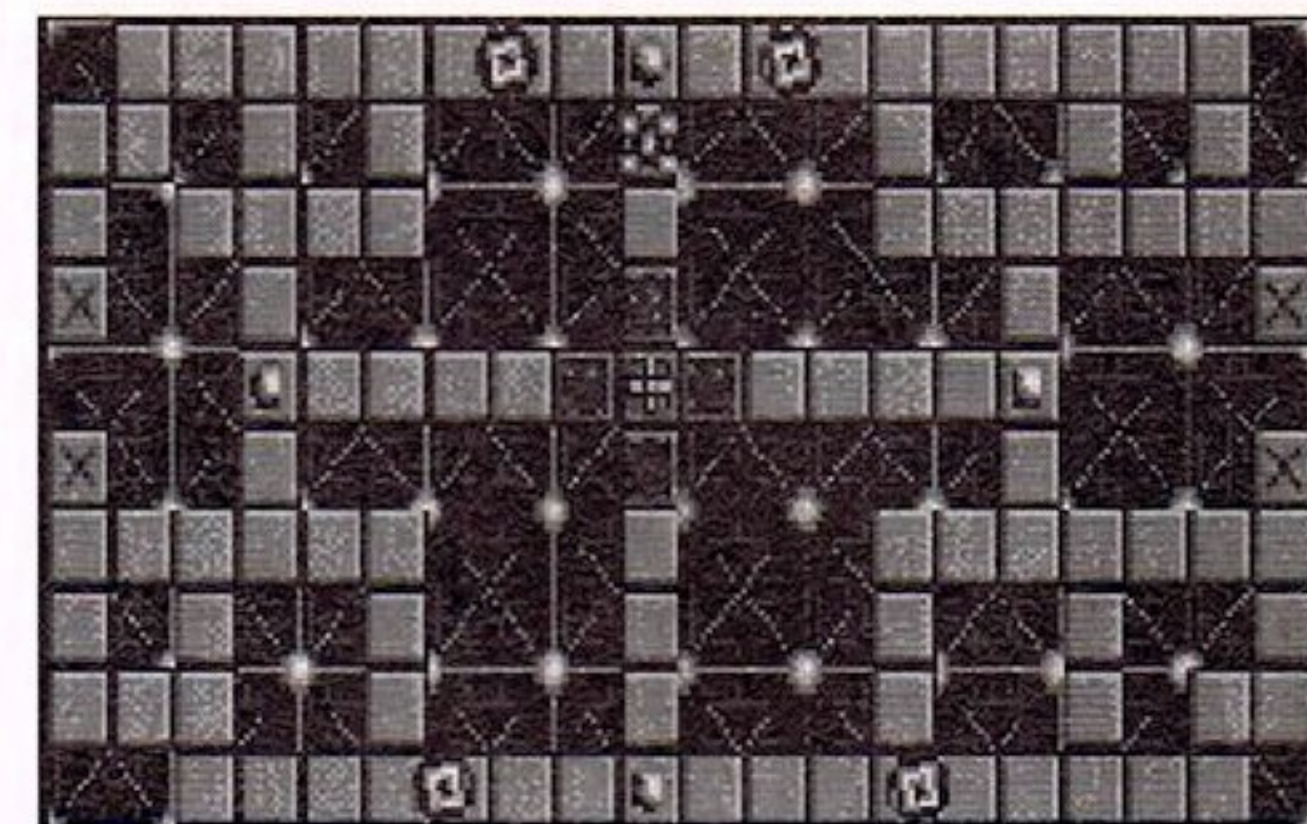
stf: To do justice to 512 colour pictures you really need a colour inkjet printer, the quality of inkjet output just can't be matched by any dot matrix printer. The Deskjet 500C can be obtained from We Serve (☎ 0705 647000) for £299 which includes a printer cable and paper. To print out your pictures we recommend that you get Imagecopy 2 Colour, £19.95 from the ST Club (☎ 0602 410241). It can handle many different colour picture file formats and has colour Deskjet printer drivers.

Prensorium problems



I enjoyed the game Prensorium on Cover Disk 51 but I am having a bit of a problem with it. When I get a high score and enter my name, after pressing <Return> nothing happens. The disk drive whirrs and I have to re-boot my ST to play the game again. What's going on?

Paul Strugnell, Surrey



■ Having trouble saving your name in Prensorium? Does your ST sulk and refuse to talk to you? Try write-enabling your Prensorium disk and everything is soon back to normal. Whatever normal is.

stf: The problem is that your game disk is write protected, the game tries to save the high score to the disk and when it can't the program sulks. To use Prensorium and save the high scores you have to copy the game to a blank disk and run it from there, keeping the disk write enabled. Always keep your Cover Disk write protected and run software from backup copies.

Upgrading



I am upgrading my ST system while I wait and see how the Falcon develops. I need a high resolution monitor and a large fast



ASSEMBLY POINTERS

Assembly problems? Let Tony Wagstaff point you in the right direction

Quick screen

Can you tell me whether the blitter chip can clear the screen faster than a routine that writes directly to screen memory?

M Cooper, Leeds

stf: The following routine, used by the Bullfrog team in their assembly tutorial way back in STF issue 23 is certainly fast, move.l screen_memory, a0 *use Physbase to find the screen address

```
lea 32000(a0), a0
moveq #0, d1
moveq #0, d2
moveq #0, d3
moveq #0, d4
moveq #0, d5
moveq #0, d6
moveq #0, d7
move.l d1, a1
move.l d1, a2
move.l d1, a3
move.l d1, a4
move.l d1, a5
move.l d1, a6
```

```
move.w #205-1, d0
cs_loop
movem.l d1-d7/a1-a6, -(a0)
movem.l d1-d7/a1-a6, -(a0)
movem.l d1-d7/a1-a6, -(a0)
dbra d0, cs_loop
movem.l d1-d5, -(a0)
```

but on a standard Atari it's not as fast as the following routine which uses the blitter to move a blank area of memory to the screen,

```
lea $FFFF8A00, a0
move.w #scr_wwid, $36(a0)
move.w #plane_wid, $20(a0)
move.w #scr_bwid-1
(scr_bwid-1)
plane_wid, $22(a0)
move.w #plane_wid, $2E(a0)
move.w #scr_bwid-1
(scr_bwid-1)
plane_wid, $30(a0)
move.b #2, $3A(a0)
move.w #$ffff, $28(a0)
move.w #$ffff, $2A(a0)
move.w #$ffff, $2C(a0)
move.b #0, $3D(a0)
move.b #3, $3B(a0)
move.l
#clear_screen, $24(a0)
move.l
```

```
screen_memory, $32(a0)
move.w #num_lines, $38(a0)
move.b #11000000, $3C(a0)
data
clear_screen dcb.b 32000
```

where scr_wwid is the width of the screen in words, scr_bwid the width in bytes, plane_wid the number of bytes in a bit plane, this will be 2 for all ST resolutions, and num_lines is the number of lines to be copied.

Clear buffer

How do I clear the keyboard buffer in assembly, and can you explain what Raster Co-ordinates are?

Orwin Bozier, Wilts

stf: The Xbios call Iorec returns the address of the buffer record in d0

```
move.w #1, -(a7)
move.w #SE, -(a7)
trap #14
addq.l #4, a7
```

Use the following to check if the buffer itself is clear,

```
move.l d0, a0
move.w 6(a0), d3
```




Music and MIDI

Sound out your music and MIDI queries with Andy Curtis



Setup dumping

In ST FORMAT 50 we printed Sandy Doe's question about restoring voice settings on the Roland Sound Canvas using Cubase. Andrew Forrest of Paisley has written in with a tip on how to do this another way, using a MIDI system exclusive dump.

Andrew writes; "Once you have set up the SC55 with the different voices, chorus settings and so on, press the 'ALL' button on the front panel. It lights up. Now, press both 'INSTRUMENT' buttons simultaneously. The 'ALL' and 'MUTE' buttons flash and the display reads 'Dump all, Sure?' Simply start Cubase recording on an empty track and then press the SC55's 'ALL' button once again. The display now reads 'Transmitting' and the relevant data is recorded at the start of your sequence. Make sure

that your music does not start until after the setup data has finished loading into the SC55 on playback."

A I Forrest, Renfrewshire

stf: Many thanks for that excellent tip Andrew, it wins the £25 prize for tip of the month. If you've got any tips send them in to us at the usual address.

Notator playback

Is it possible to play back Notator Alpha files through any other sequencing program?

Paul Lamm, Essex

stf: As far as we know, the only way to do this is to save your music as a standard MIDI file when it is completed. This MIDI file can then be loaded into practically any other modern sequencing package. Try it.

Now you see it...

The author of the program Soundlab is not specified in either the read me

Yes, this program is Shareware! To register, just send \$20 to the address below. Please include this number:

#6Fnie-003

In return for registering, you'll get a printed manual and free updates to the program. Here's the address:

Damien M. Jones, PSC 8 Box 637, APO AE 0910

Only \$20? Unbelievable!

Of course there are registration details with the excellent Soundlab program. This little dialog keeps popping up every few minutes for one thing. It's well worth the money just to make it go away.

file or in the program itself. I'd very much like to register and receive my manual and future updates from him.

Sonke N Greimann, Netherlands

stf: We really don't know where you've been looking, Sonke. The registration dialog box appears as soon as you load the program. We've even taken a picture of it so that you can see. You can access this screen at any time by clicking on the Info menu at the top left hand corner of the screen. Not only that but the message keeps popping up as you use the program. We hope you enjoy your registered copy of this outstanding program.

16-bit sampling

The Replay 16 sampling cartridge works with your STFM. There, we've said it. We'd also like to point out, in order to quell what is becoming a steady flow of letters, that the samples created by Replay 16 can only be used (as far as we know) by the Breakthru sequencer from Gajits software.

So, if you have Cubase, Notator or any other sequencer you cannot incorporate the samples in your music. If you have two STs then why not use one purely for sampling and playback? It's still a great deal cheaper than buying dedicated sampling hardware.

hard drive that can be used both with my ST and with my Falcon, when I eventually get one. What is the best solution?

Joel Holmes, Brighton

stf: The hard drive problem is simple enough to solve, get yourself a SCSI hard drive with the ICD Link for use with your ST. When you buy a Falcon, you just have to buy a SCSI1 to SCSI2 lead to connect it to the

hard drive. System Solutions (☎ 0753 832212) have a 170MByte hard drive for £429, this should be big enough to get you started.

The monitor problem is a bit more complex. Ladbroke Computing sell a VGA monitor adaptor for £20 which enables any VGA monitor to be used with the ST in high resolution mode. If you buy a colour VGA monitor from any computer shop or mail order company you can use it with

your ST and your Falcon. Once you buy your Falcon, your Link and VGA adaptors become redundant unless you are going to keep your ST.

Scanning garbage



I am using a hand scanner to scan in articles from magazines so I can keep them for future reference. The problem comes

when I try to load the scans into Protext 4.3, they just look like a load of gibberish. Am I doing something wrong? The scanner software needs GDOS to print, is the lack of GDOS causing the problem? If it is, then where can I get GDOS from?

C Collier, Cambridge

stf: Trying to use Protext to load your scans is causing the problem. Scanners create picture files, normally

```
move.w 8(a0),d4
sub.w d3,d4
beq buffer_clear
```

Finally use Bconstat to check if there are any more characters, and Bconin to clear them,

```
loop
move.w #2,-(a7)
move.w #1,-(a7)
trap #13
addq.l #4,a7
cmp.l #0,d0
beq buffer_clear
move.w #2,-(a7)
move.w #2,-(a7)
trap #13
addq.l #4,a7
bra loop
buffer_clear
```

Raster Co-ordinates, or RC, are those most commonly used to represent the screen dimensions. The RC 0,0 is the top left of the screen, while the right side of the screen depends on the resolution, 639 for high and medium, and 319 in low res. The other co-ordinate system supported by Atari is the Normalized Device Co-ordinate system, or NDC, which sets the bottom left co-ordinate to 0,0, and increments the xy co-ordinates

to a total of 32767,32767 at the top right. You can use this by setting element 10 of intin to zero, rather than two which is used for RC, when opening a virtual workstation with the VDI v_opnvwk call. The VDI converts the image stored in NDC into RC, although it has the disadvantage of being very slow, and so is seldom used.

Picture window

I follow your Bytecruncher's Guide to Assembly with great interest, and have just got to grips with windows. I'm trying to display a Degas picture inside a window. Can I use the GEMDOS Fforce call to direct the output to the window?

Matthew Davidson, Plymouth

stf Unfortunately not. Fforce can only redirect output to the screen as a whole. What is needed is the VDI cro_cpyfm call. This was discussed in last month's ST FORMAT, turn to page 47 if you missed your copy. The following routine shows you how to use to fill the contents of a window with a picture loaded at picture_address. Run this every time you receive a redraw message from evnt_multi, with d0-d3 contain-

ing the rectangle to refresh as returned by wind_get.

```
rsreset
fd_addr rs.l 1
fd_w rs.w 1
fd_h rs.w 1
fd_wdwidth rs.w 1
fd_stand rs.w 1
fd_nplanes rs.w 1
fd_r1 rs.w 1
fd_r2 rs.w 1
fd_r3 rs.w 1
MFDB rs.w 0
bss

src ds.b MFDB
dest ds.b MFDB
text
v_hide_c
move.w d2,d4
move.w d3,d5
add.w #x_offset,d4
subq.w #1,d4
add.w #y_offset,d5
subq.w #1,d5

add.w d0,d2
subq.w #1,d2
add.w d1,d3
subq.w #1,d3
move.w #x_offset,ptsin
```

```
move.w #y_offset,ptsin+2
move.w d4,ptsin+4
move.w d5,ptsin+6
move.w d0,ptsin+8
move.w d1,ptsin+10
move.w d2,ptsin+12
move.w d3,ptsin+14
lea src,a2
move.l
picture_address,fd_addr(a2)
move.w #x_pix,fd_w(a2)
move.w #y_pix,fd_h(a2)
move.w
#x_word,fd_wdwidth(a2)
clr.w fd_stand(a2)
move.w
#planes,fd_nplanes(a2)
clr.l dest
lea src,a4
lea dest,a5
vro_cpyfm #3,a4,a5
```

x_offset and y_offset are the top left co-ordinates of the picture, as it appears in the window. Your program can calculate these if you want to use slider bars to scroll the window. x_pix and y_pix give the screen dimension, x_word is the screen width in words, and planes can be obtained from vq_extnd in the fourth element of work_out.

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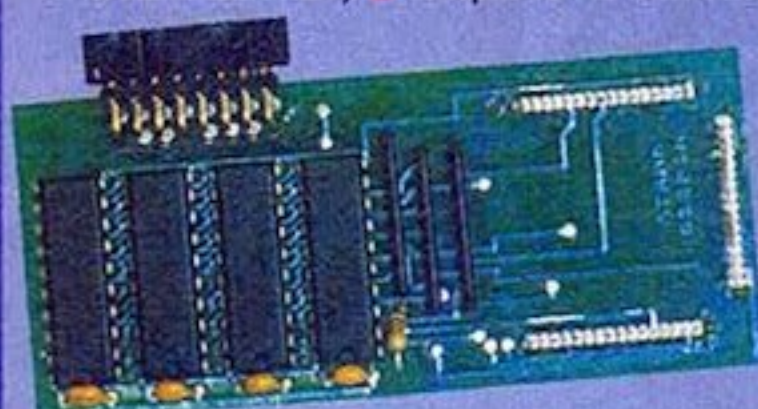
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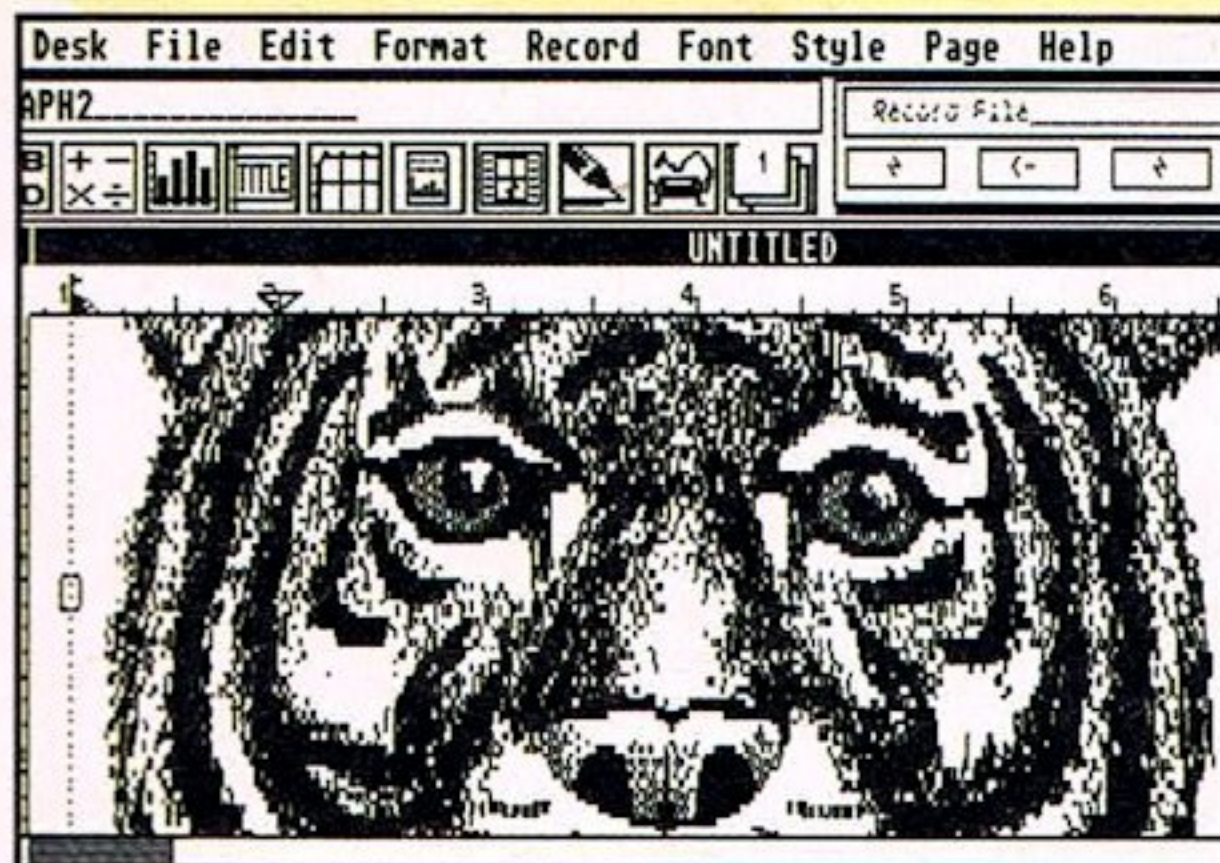
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■ **Wordflair in action loading an IMG file. Wordflair is another amazing Cover Disk give-away on ST FORMAT 52, turn to page 47 to order a copy if you missed it. How do we do it?**

in Image file format (IMG) or Degas high resolution format (PI3). Protext can only read text files, it is not capable of loading graphics. If you want to be able to read your scans you have to use a graphics program or use a DTP or document processor that can import IMG or Degas PI3 files. Try Wordflair from Cover Disk 52, it can read IMG files directly and has a utility program to convert PI3 pictures to IMG files. You can get a copy of GDOS from the ST Club for £4.25, call them on 0602 410241.

Writeable CD-ROM?



I am considering adding a hard drive to my ST setup and I am interested in getting the Link and a non-Atari hard drive. What should I look for when buying a hard drive to use with the Link? Would I be better off getting a CD-ROM drive? I have seen them advertised for £269.99, if I add that to the cost of the Link it adds up to a reasonable price.

I understand how a hard drive is partitioned and formatted, but how do you go about formatting a CD-ROM disk and how much is a blank CD?

W M Black, Brighton

stf: Er, you are suffering from a misunderstanding about CD-ROM drives and how they work. A CD-ROM disc is already full of data when you buy it, up to 650MBytes of information can be stored on a disc depending on the type of data. You can't buy blank CD-ROM discs. The reason it's called a CD-ROM is because you can only read data from a disc, you can't save information to it. ROM stands for Read Only Memory, exactly the same as the ROM chips in your ST which store the TOS operating system.

If you want to buy an ICD Link and add a "foreign" hard drive to it you must make sure that you buy a SCSI hard drive, this is the only type of drive that works with the Link. External SCSI drives are available for Apple, PC and NeXT computers, so you may like to shop around for a



STOS CORNER

Billy Allan sorts out some of the mysteries that surround the world of STOS

A bit of escapism

Is there any way of recognising the <Esc> key from within a STOS Basic program?

Irzhad Azmutally, Luton

stf: Yes, try REPEAT : G\$=INKEY\$: S=SCANCODE : UNTIL S=1.

Synchronicity

I have heard that it is possible to do hardware scrolling on an STFM. Is this true, and if so am I able to do it from STOS?

Robert Engles, Swansea

stf: Yes, it is possible, it's normally called "cheap" hardware scrolling. This is achieved by adding and subtracting 1280 bytes from the screen address which moves the screen up or down by eight pixels, using this command.

PHYSIC=PHYSIC-1280

In a ste-w

I am trying to write an art package in STOS and I wish to make use of the STE's extended colour palette. Unfortunately, whenever I save the picture or use GET PALETTE the palette is lost. Is there any way around this?

Alan Mandle, Glenrothes

stf: The only way around this is to store your palette in an array. Whenever you want to save the picture you have to copy the contents of the array to the palette area of your screen bank (the screen's address plus 32000 bytes). If you want to set the palette you could then do something like

LOK \$45A, START(X)+32000

where X is the screen bank.

bargain. Several companies sell the Link with SCSI drives, try System Solutions (0753 832212), they sell a 42MByte SCSI drive with the Link for £359, an 85MByte drive for £379, a 120MByte drive for £399 and a 170MByte drive for £429.

More POV problems



I have successfully rendered the Pacman picture using POV from Cover Disk 49. I then tried to render the Palace picture but the program crashed on line 61. I haven't tried again because the pictures take so long to render. I used exactly the same formula for the Palace picture as I did for the Pacman picture;

tgatrace 320 200 palace
palace.tga

Handy hint

If you are going to be copying the values from one array to another, to store the old co-ordinates for you sprites for instance, you can use the COPY command to move the whole lot at once rather than a FOR...NEXT loop to copy each value individually. For example, the two routines below achieve the same thing, but the second is over 80 times faster!

```
10 rem> The slow method <
20 dim X1(9999),X2(9999)
30 for T=0 to 9999
40 X2(T)=X1(T)
50 next T
```

```
10 rem> The fast method <
20 dim X1(9999),X2(9999)
25 V1=varptr(X1(0)) : V2=varptr(X2(0))
V11=varptr(X1(9999))+4 : V22=varptr(X2(9999))
30 copy V1,V11 to V2
```

Palettical correctness

After drawing a map with the MAP.ACB program, I cannot seem to get the palette. I have tried the normal H=HUNT(START(1)...) but it did not work. Please help.

Andrew Tucker, Milton Keynes

stf: Have you actually loaded the sprite bank into bank one before getting the palette? This is the only thing we can think of which would cause this error. Try entering

```
"load "sprites. msk",1
1:loke $45A, hunt(start(1) to start(1)+length(1),"PALT")"
```

and that should work for you.

Assembly pointers

Each time I try to call an assembly program from STOS I get an address error. I am calling it like this;

```
reserve as work 7,10000
```

```
load "FILE_NAME.PRG",7
call 7
```

Tim Lloyd, Birkenhead

stf: The correct way to load assembly programs into STOS is to load them directly into a memory bank without reserving it first - load "FILE_NAME.PRG",7. STOS automatically reserves a bank as PROGRAM and loads it in. CALL should then work as normal.

Super STOS

I recently sent off for the STOS accessory disk. All I got back was an envelope saying "Gone Away." Can you please give me the address of a company which stocks this disk? Also, could you tell me if it's possible to erase a memory bank from within a running program and whether I can have more than 12 screens stored in memory? I have read that a Super STOS is being developed for the Falcon. Can STOS games run on it?

Keith Preston, Dunboyne

stf: We are unaware of anyone who would supply you with just the accessory disk. Europress are no longer supporting STOS and refuse to give the rights to anyone else so we can only suggest that you try to get hold of a second-hand copy. If anyone's got a copy, send it to us and we can pass it on.

Erase memory banks from within programs by using the ERASE command as you would in the editor. You can have as many screens stored as you like assuming you have enough memory. 12 screens take up about 384K - more than you are left with on a normal 512K ST.

Details of FALCOS are very sketchy. The details we have is that a French company called Brainstorm are writing it and that it may be bundled with the Falcon. It seems that it is to be a Falcon version of AMOS Professional, which means that it should be possible, with some work, to convert old STOS listings to the new style.



■ **If you don't have too many spare disks to store your POV pictures on, try rendering them at a smaller size. Instead of entering 320 200 as the picture size, enter 160 100. This results in a Targa file a quarter of the size, this rendering of the Palace POV file only takes up about 50K.**

Is this correct?

Ian Smitherman, Suffolk

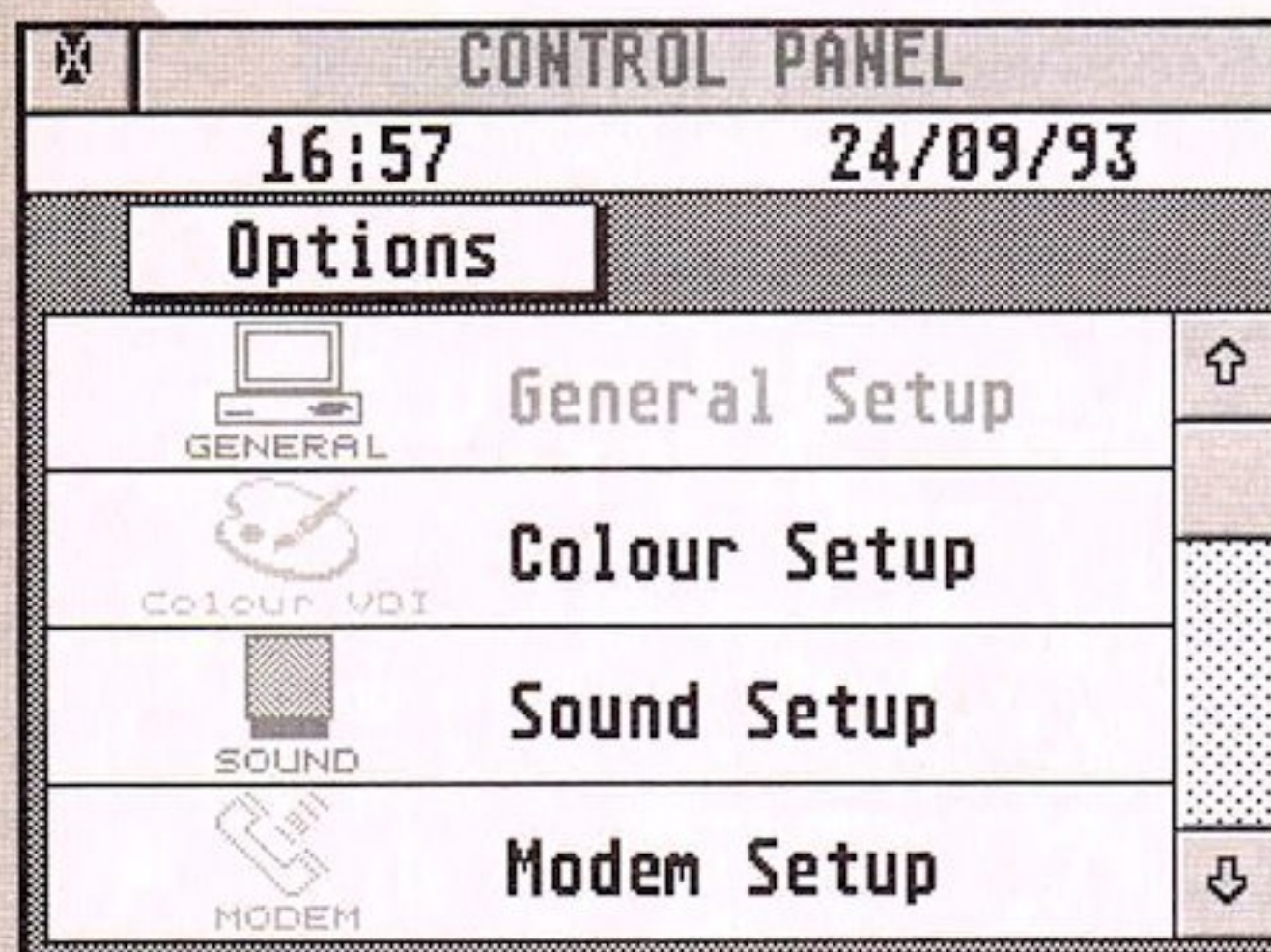
stf: You are doing everything correctly. We have managed to duplicate your problem on one of our office STs. Your problem is caused by your floppy disk running out of room to store the picture as it is created and saved one line at a time. By running on a floppy based system then there is only enough room for a single 24-bit Targa image on the disk with the POV software, because the image size is

just under 200K. Every time you create a new picture, copy it to a blank floppy disk and then delete it from your working disk. You can fit three Targa images on a 720K floppy disk.

In control



Can you tell me where I can get a copy of XCONTROL.ACC, I have accidentally deleted my working copy and I no longer have Cover Disk 25. I am also interested



It's small, it's versatile, it's **Xcontrol!** The latest version of **Xcontrol** enables your ST to do everything except butter your toast, you need a Falcon for that.

in speech synthesis. Do you know if there are any programs for the ST that use actual human speech rather than generating speech via the sound chip?

Miles O'Brien, SFPO

stf: Goodman International (on 0782 335650) Accessory Disk 4 contains the Xcontrol Accessory and a large selection of CPXs. Goodman's also have the speech program that you are after. Digispeech uses samples of speech which you have to build together to make words. It's available on disk GD 624, Goodman's disks cost

£2.75 each or £2.50 each for two disks or more.

Canvas images



When I save images created with my hand scanner as IMG files, I can't load them into Canvas even though I use the Load IMG option. Well, I can load them but they are completely garbled when displayed on-screen. What am I doing wrong?

Barry Chartis, Liverpool

stf: Nothing, the fault lies with Canvas because it doesn't read Image files correctly. Save your scans in Degas format, then you can load them into Canvas without problems.

Write off



I am trying to install Spell One from Cover Disk 25 as a Desk Accessory so that I can use it with Write On from Cover Disk 33. I have copied it to the root directory of my Write On working disk but my ST crashes after loading the Bugfix program from the Auto folder, it worked perfectly before. Is this happening because it's impossible

to load Desk Accessories after running an Auto folder?

Andrew Teggert, Durham

stf: Desk Accessories can load without problems after Auto folder programs - in most cases. What is happening in your case is that the LA.PRG supplied with Write On is not compatible with Spell One, this seems to be a common problem with a lot of Desk Accessories and Write On. Unfortunately there is no way around the problem short of disabling the LA.PRG in the Auto folder.

Which Falcon?



I am going to buy a Falcon030 and want to know which is the best model to buy. The 1MByte machine is the cheapest, but I am not sure if it's the right choice. Can you recommend which model I should buy?

Sam Evans, Avon

stf: If you really want to use any serious applications on the Falcon then the minimum configuration you should buy is a 4MByte machine with an internal hard drive.

The 1MByte Falcon without a hard drive just doesn't have enough

memory or storage capacity to run serious applications, or even very large games, effectively. This is because in the higher screen resolutions a 256 colour screen takes up about 700K of RAM, almost all that's available, making the 1MByte Falcon virtually useless. It's more expensive, but get the 4MByte HD model.

Crazy keyboard



Occasionally when I turn on my ST I get a loud, continuous beeping noise and the keyboard refuses to work. I can load software but I am still unable to use the keyboard, at other times it seems to have a mind of its own. I have checked for viruses but my disks are all clear.

Neal Venn, Lancs

stf: This sounds like a joystick problem rather than a keyboard fault. The symptoms you describe exactly match what happens to your ST if you have a joystick plugged in with autofire switched on. The reason it doesn't happen all the time is because you don't always need to use autofire in games. Always unplug your joystick when you are using your ST for non-games activities.



GFA CORNER

Get the answers to your GFA problems with the help of **Mac Marsden**

Access denied

The password program I have written does not work. When I put it in the root directory as a Desk Accessory my ST constantly re-boots and the Desktop does not appear.

Dinesh Chaddah, Newcastle-upon-Tyne

stf: We have added the line you omitted. An IF statement must end with an ENDIF statement, with this command included your program works well.

```
CLS
REPEAT
  PRINT "PLEASE ENTER PASS _
  WORD"
  INPUT i$
  IF i$<>"EUREKA"
    PRINT "INCORRECT PASSWORD,_
    ACCESS DENIED"
  ENDIF ! ##### ADDED _
  LINE #####
UNTIL i$="EUREKA"
CLS
PRINT "PASSWORD CORRECT"
END ! REMOVE THIS LINE IN _
ACC PROGRAM
```

If you are using this program as a Desk Accessory from your root directory you must add extra programming to tell the computer that it is to be treated as a DA program. The following code does this for you.

```
$m XXXXXX
ap_id&=APPL_INIT()
me_id&=MENU_REGISTER(ap_id&,"_
  YYYYYYYYYY ")
exit!=TRUE
DO
  ~EVNT_MESAG(0)
  IF MENU(1)=40

  REM YOUR PROGRAM GOES IN _
  HERE

ENDIF
exit!=FALSE
LOOP
```

Where \$m XXXXXX is the amount of memory to be reserved for the Desk Accessory program. The best way of doing this is to Compile and Link the program, look at the size of the compiled program and add around 5K to this figure, then re-enter the editor and then include this figure in the first line of your program like this;

```
$m 50000 reserves 50,000 bytes of
memory for your Desk Accessory to be
stored in.
YYYYYYYYYYY is the name of the Desk
Accessory as it will appear in the Desk
menu.
```

Just scrolling along

I have some problems with scrolling. How can I make some text scroll sideways across the screen, and can I do the same with pictures?

Neil Eke, London

stf: The following program should get you on the right track. The amount of text shown on the screen is held in y% in this case ten characters, this may be altered to suit your needs and the PAUSE statement has to be altered or deleted depending on how many characters you are printing on the screen at once.

```
a$=".....ST FORMAT.GFA
ANSWERS....."
x%=1
y%=10
DO
  ATEXT
  100,100,2,MID$(a$,x%,y%)
  ADD x%,1
  PAUSE 4
  IF x%+y%>LEN(a$)
    x%=1
  ENDIF
LOOP UNTIL INKEY$<>" " OR MOUSEK
```

Load a Degas picture into the INLINE statement, then run the following program. You then see part of the picture (50 pixels) scroll up the screen. In this case we are altering the variable x%, but if you wish the picture to scroll from left to right or vice versa you need to alter variables z% and y%.

```
INLINE e%,32066 ! load your_
picture here.
' GET THE COLOUR PALLETTE,_
SET IT.
a%=e%
col$=""
DO
```

```
col$=col$+CHR$(PEEK(a%))
ADD a%,1
LOOP UNTIL a%>e%+34
VOID XBIOS(6,L:VARPTR(col$)+2)
' MAIN PROGRAM
s_adr=e%+34
d_adr=XBIOS(2)
x%=1
y%=639
z%=0
q%=0
w%=100
DO
  RC_COPY s_adr,z%,x%,y%,_
  50 TO d_adr,q%,w%
  ADD x%,1
  PAUSE 1 ! REMOVE if _
  not required
  IF x%+50>400
    x%=1
  ENDIF
LOOP UNTIL INKEY$<>" " OR MOUSEK
S_ADR and D_ADR must be initialised
as shown for RC_COPY, where S_ADR
is the source picture and D_ADR is the
destination. The variable x%+50 in the
IF statement is used to look for the
end of the picture data. We have
used 400 because the high resolution
screen size is 640 x 400 pixels, but
this could be any size you require
within your chosen screen resolution
restrictions, you could, if you wished
have the picture moving on the
screen as well as scrolling by altering
the x y coordinates in the destination
address q% and w%, but you would
have to clear the previous screen oth-
erwise old unwanted data would be
left on the screen.
```


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SCREENPLAY

A bumper budget games bonanza in this issue, folks – just the thing to fill up your Crimbo stockings

Game help galore!

Gamebusters brings you the third part of our handy *Chaos Engine* solution starting on page 80, but if that's too fast-paced for you, check out our handy walkthroughs for *Ishar 2* and *The Patrician* starting on page 82. We've even got the complete list of level codes for our excellent Cover Disk game, *Prensorium*, snuggled warmly in between. Then there's Captain Blunder on page 87 if you've got a specific gaming problem.

■ **Captain Blunder's the ST gaming wonder. Apparently.**

GAMEBUSTERS page 80
CAPTAIN BLUNDER page 87

STREETFIGHTER 2

What? *Streetfighter 2* out on budget already? But it was only released in February at full-price. US Gold, in their infinite wisdom, have re-released this corker of a game just in time for Christmas. Check it out on page 72.

DREAMLANDS

Daze bring *Ishar*, *Transarctica* and *Storm Lord* together for the first time in their new compilation, and hope that nobody notices *Transarctica*. To find out why turn to page 79.

WORLD CLASS RUGBY

Audiogenic's classic rugby game was in two versions: *World Cup*, and *Five Nations*. Now you can buy them both together for under £15. Play Great Britain vs New Zealand on page 73.

CHARTS

Your guide to the top-selling ST games throughout the UK...

This month	Last month	Game	Publisher	Price	STF Rating
1	(1)	Sensible Soccer 92/93	Renegade	£25.99	91%
2	(5)	Premier Manager	Gremlin	£25.99	85%
3	(2)	Zool	Gremlin	£25.99	89%
4	(3)	Championship Manager '93	Domark	£29.99	80%
5	(9)	Streetfighter 2	US Gold	£27.99	91%
6	(4)	Civilization	MicroProse	£34.99	92%
7	(-)	Dogfight	MicroProse	£34.99	83%
8	(10)	Lemmings 2	Psygnosis	£29.99	96%
9	(6)	Formula One Grand Prix	MicroProse	£34.99	81%
10	(17)	Nigel Mansell's World Championship	Gremlin	£29.99	69%
11	(8)	Prince of Persia	Hit Squad	£7.99	90%
12	(7)	The Chaos Engine	Renegade	£25.99	94%
13	(11)	Pirates!	Kixx XL	£12.99	74%
14	(20)	First Division Manager	Codemasters	£7.99	64%
15	(-)	Jack Nicklaus Golf	Hit Squad	£7.99	**0%
16	(-)	James Pond 2 – Robocod	Kixx	£9.99	86%
17	(12)	Treasure Island Dizzy	Codemasters	£4.99	82%
18	(-)	The Addams Family	Hit Squad	£9.99	74%
19	(18)	Ishar 2	Daze	£29.99	92%
20	(14)	MicroProse Golf	MicroProse	£34.99	95%

There's little change this month in the positions of the top few games with *Sensible Soccer* still in the lead closely followed by the other footie games *Premier Manager* and *Championship Manager*. Expect to see *Streetfighter 2* and the *Secret of Monkey Island* regain their previously high positions following their budget-priced re-releases.



■ **Sensible Soccer stays at the top of the chart proving the theory that 22 men and a ball on a disk sells.**

STF REVIEW POLICY – It is ST FORMAT policy to only review completely finished games – that is, games you could actually buy in the shops, never incomplete or demo versions. We won't be rushed into reviewing unfinished games to beat our "competitors." We assume all games run on 520 STFM's unless otherwise stated.



KINGMAKER

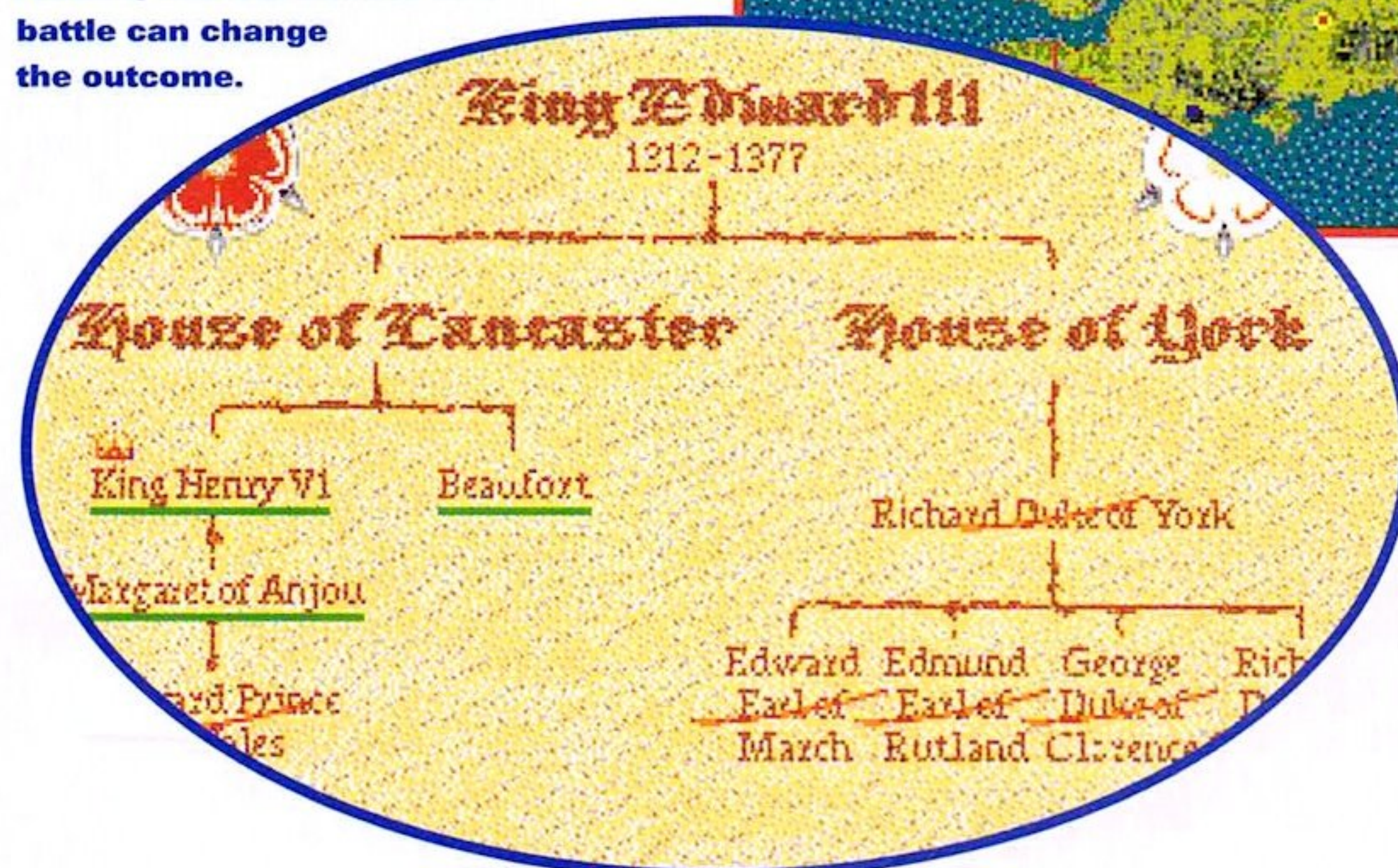
Plague, pestilence and violent death can be yours in this intriguing slice of life from the Middle Ages as Rob Mead discovers

Poor Queen Liz may have had a tough time over the last couple of years, but that's nothing compared to what her predecessors had to put up with. Regularly taken prisoner, executed or exiled to France, they were mere pawns in a political game played by the most powerful dynasties in England – the House of York and the House of Lancaster.

Based on the board-game of the same name, *Kingmaker* takes this turbulent period in our history and converts it into a test of cunning and strategy against up to five ST-controlled factions. The aim of the game is to capture and control the last surviving Royal Heir by defeating your opponents and executing all other pretenders to the throne. Only when this is achieved can you crown the Royal Heir and declare yourself Kingmaker.

The action takes place on a map of Mediaeval England which has been divided up into a series of squares containing castles, cities and cathedrals. Each human and ST-controlled player is awarded a

■ **Heavily-outnumbered by a rival faction, manual control of a battle can change the outcome.**



number of nobles and troops – depending on the difficulty level – which they move around the game screen. Individual nobles can also be allocated various titles and offices of state to make them a lot more powerful.

From here, it all becomes hugely reminiscent of the board-game. Each noble is allowed to



■ **The Faction Build screen is where you allocate troops, titles and offices of state to your nobles.**

or pitched battles which you have the option of controlling.

Less predictable, though, is the Events Phase which can throw

“You find yourself at parliament dishing out offices of state to your rivals”

up all kinds of unexpected terrors and treats – friendly nobles can be sent scuttling back to their home territories by a Scots Raid and rival

EVERYTHING'S COMING UP ROSES

The battle between the Yorkists and Lancastrians was confusing at the best of times, so here's our guide to Kingmaker's map of Merrie England



1 Cities

Can be friendly, neutral or hostile. Contain a garrison of 300 troops with unlimited capacity for visiting forces.

2 Fortified Towns

Can be friendly, neutral or hostile. Contain a garrison of 200 troops, with capacity for a further 400.

3 Unfortified Towns

With no garrisons of their own, unfortified towns can easily fall victim to visiting armies.

4 Ports

Finding friendly or neutral ports is essential if you're to stand any chance of capturing the royal heirs in France and Ireland.

5 Royal Castles

A castle controlled by a royal heir contains a garrison of 200 troops. A visiting army adds 300.

6 Noble Castles

Each fortress has a garrison of 100 troops and can act as a bolthole to a further 300.

7 Cathedrals

Royal Heirs can only be crowned in a cathedral accompanied by an archbishop or two bishops.

8 Roads

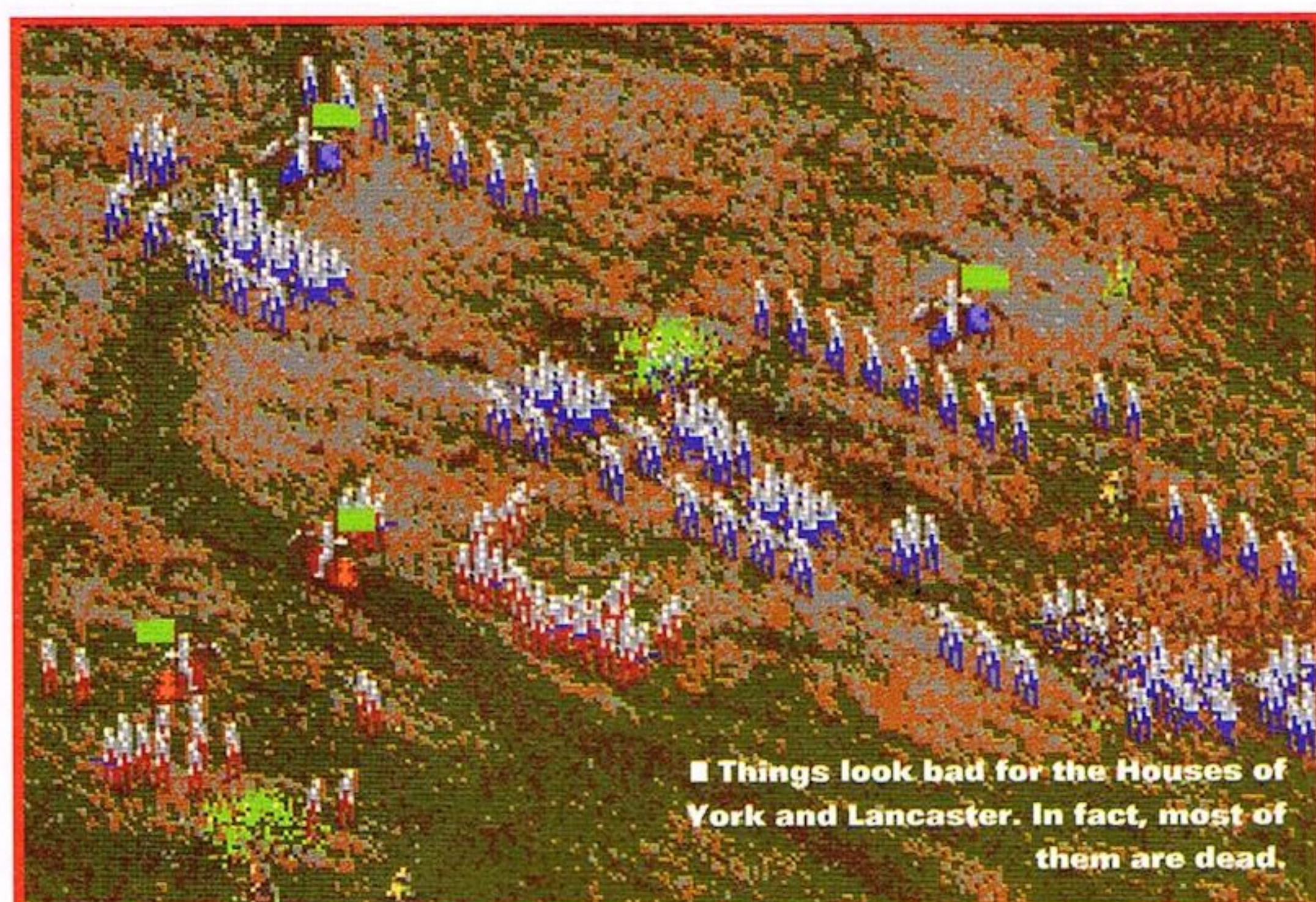
Enable you to move your forces around more quickly, provided their paths are not blocked by unfriendly cities or rival factions.

9 Ships

Shuttle various quantities of troops to and from the ports dotted around the coast.

10 Nobles

Represented by a shield embellished with his coat-of-arms. Combined forces are represented by the emblem of the most senior noble.



■ Things look bad for the Houses of York and Lancaster. In fact, most of them are dead.

factions can be deprived of their royals by an outbreak of plague.

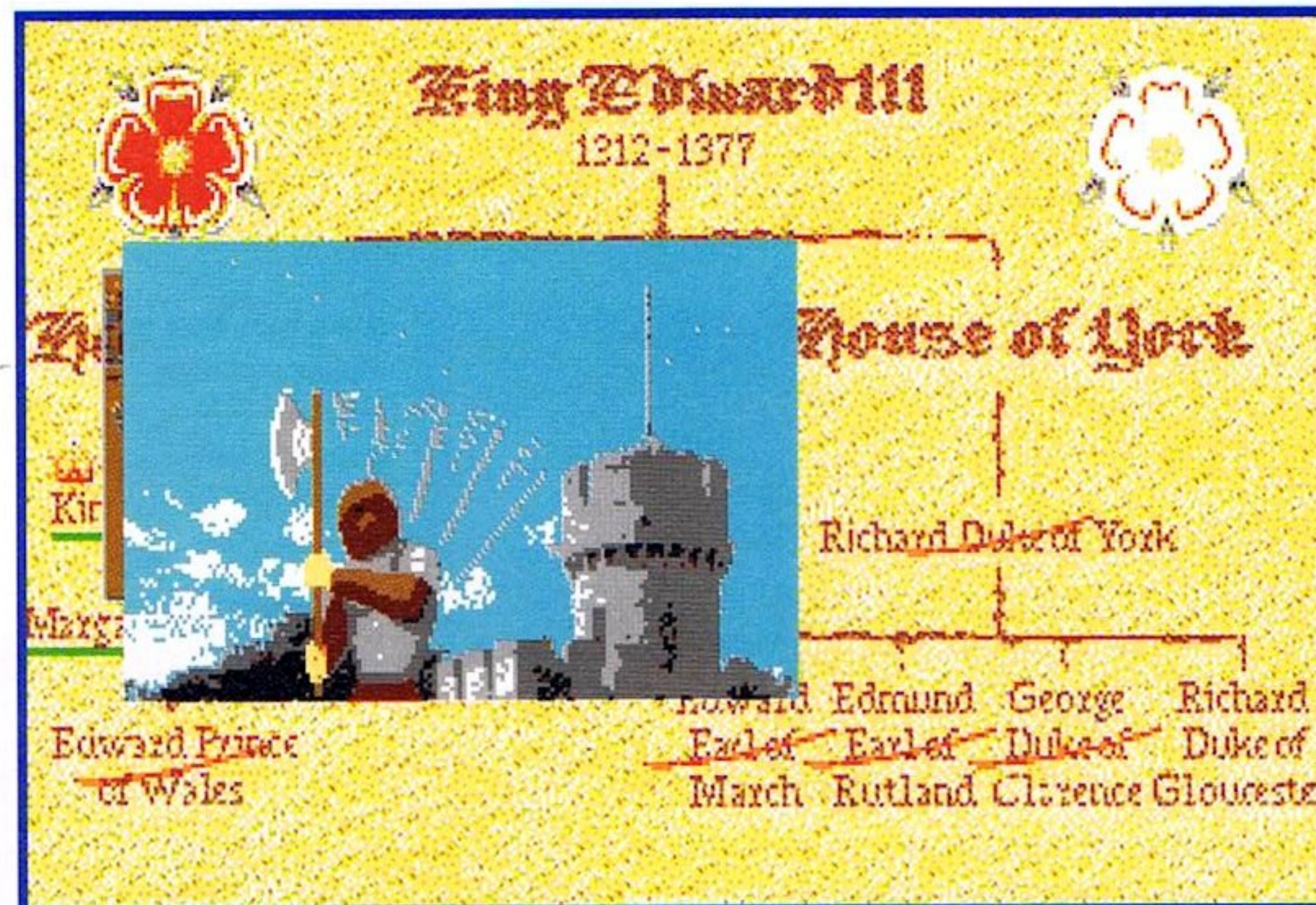
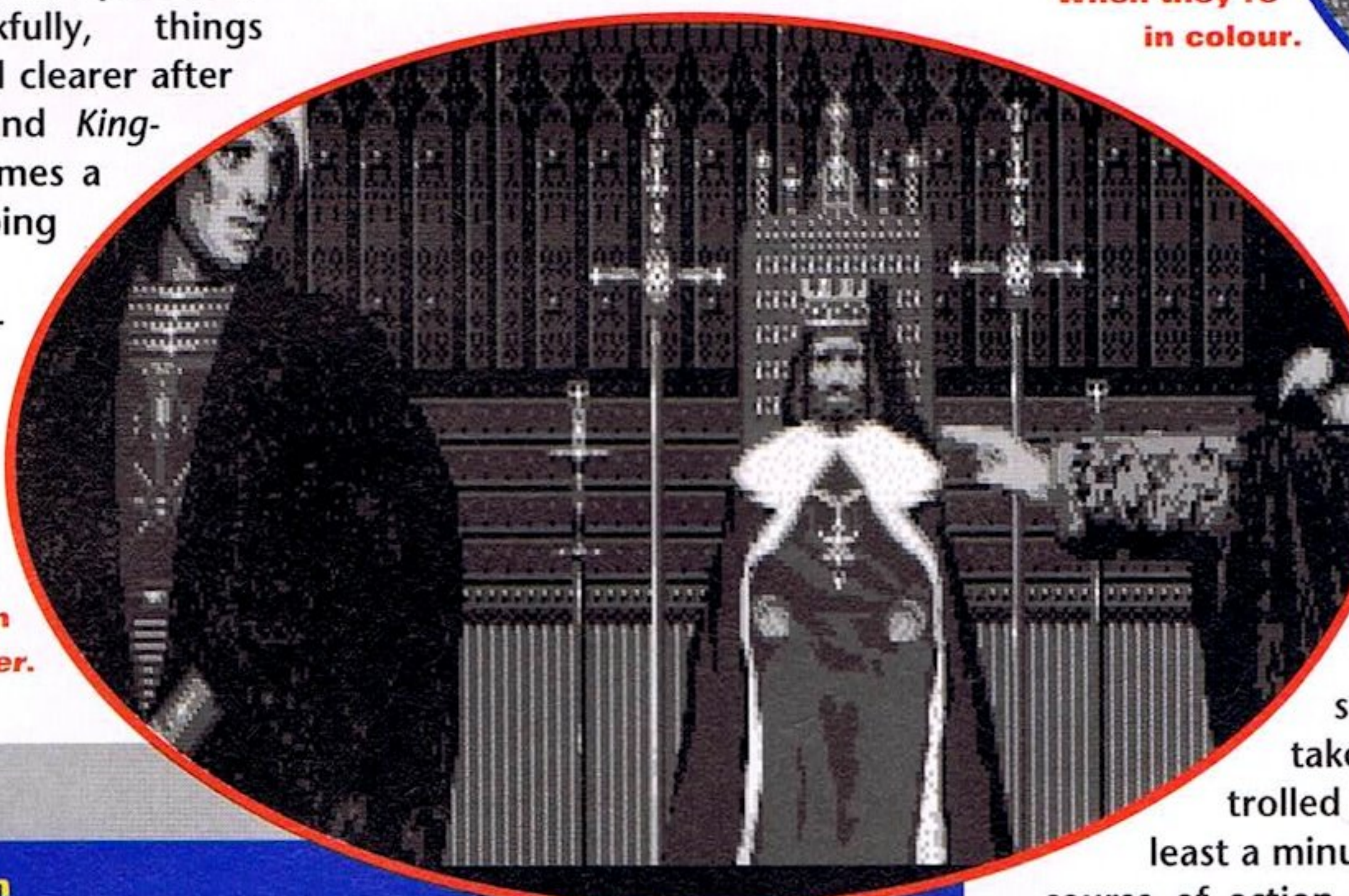
Oh, it's all so confusing. *Kingmaker's* one of those games you need a degree in Mediaeval History to understand. For a start, you find yourself at parliament dishing out offices of state to your rivals, only for them to chop your head off five minutes later. You're also faced with the alarming dilemma of butchering members of the same family so one of them can end up on the throne. It makes the Bosnian conflict look like an episode of *Neighbours*. Thankfully, things become a great deal clearer after an hour or two and *Kingmaker* actually becomes a simple and absorbing game to play.

However, *Kingmaker's* big prob-

■ A weak monarch and some very powerful families control the destiny of England in *Kingmaker*.

lem is its laid-back attitude to speed. Every single action you take

"You're also faced with the alarming dilemma of butchering members of the same family"



■ The headman takes his revenge on a captured noble and separates the poor chap's head from his neck.

■ This really is remarkable. Let's not kid ourselves, the bloody image of battle is so much better represented by black and white images. Only because people tend to throw up when they're in colour.



is met by a long period of nothingness while your ST accesses the disk for the next scene. It also takes your ST-controlled opponents at least a minute to decide on a course of action and carry it out. This invariably means you spend a lot of time sitting there like a peasant in the stocks, waiting for someone to lob rotten tomatoes at you.

Getting around the various menus turns into a real test of stamina, especially if you want information from the Chronicle or need to re-organise your factions. Your best bet at this stage is to clear off and clean your car or something while your ST sorts the mess out. At least the battle sequences enable you to get your hands dirty by sending hordes of spearmen piling into the opposition.

It all appears to come down to the graphics. The map screens are overly fussy – the sea around the Faction Build map looks like it's caught the measles and there are far too many piccies of Shakespeare

and badly-digitised castles. A simpler-looking game would have been just as effective and faster. The game's icon-based mouse controls are a lot easier to contend.

Verdict

Kingmaker could have been so good. One of the most tumultuous periods in our history, a hugely-successful board-game and some increasingly-absorbing gameplay should make this a winner. It certainly has its moments, but most of the advantages are thrown away by the constant disk-accessing and over-ambitious graphics. *Civilization* is a much better prospect. **stf**

11 Events Screen

Shows your current location on an overall map. Also displays messages during the Events Phase.

12 Faction Build

Click here to make changes to your faction's line-up.

13 Family Tree

Gives you information about the surviving Royal Heirs and the factions which control them.

14 Secret Support

Nobles who've agreed to support you during the Reinforcement phase can be accessed here.

15 Chronicle

Contains information about all aspects of the game.

16 Review

Click here to check location of royal heirs and opposing factions.

17 Where is?

Click here to find individual towns, nobles or royal heirs.

18 Save Game

Enables you to save your current game or load an old one.

19 Games Options

Click here to Quit, Restart the game or toggle the Sound and Auto-Help options on and off.

20 Fresh Horses

Awarded in the Reinforcement phase, Fresh Horses boosts the movement range of an individual noble's forces.

Kingmaker

£35.99 US Gold

☎ 021 625 3366

1MByte RAM required

Hard drive installable

Highs

■ Absorbing mediaeval strategy game.

Lows

■ Constant disk-accessing slows it to a snail's pace.





SHADOWLANDS



■ As you can see, there's plenty of land. Not too many shadows though. Where's the connection?



■ Much of the action does take place inside a dingy old dungeon. But we thought that would ruin your appreciation of the great outdoors.

RPGs aren't everyone's cup of proverbial tea. The manuals usually start with an introductory story written by someone whose literary imagination is stunted by a Dark Overlord who controls all that he surveys. Invariably, a band of select heroes are the last hope for mankind and they inevitably face overwhelming odds in their assigned quest.

Unsurprisingly, you find yourself under the bondage of this genre's cliché. Not that that's really a problem, mind you. No, not at all. In fact, *Shadowlands*, despite the rather tedious plot, is a pleasant little game in its own right. The ability to customise characters to your own parameters is the best step

thinkable in the goal toward personal involvement; you can alter name, eye, ear, nose and mouth. And also the characters attributes of strength, combat ability, magik level and health.

Compromise has to be reached for optimum values but

hey, isn't that what good dungeoneering is all about?

If you're more impatient you can start with the ready-selected characters. This is useful, if only to get acquainted with the finely tuned intuitive control system. *Dungeon Master* fans may recognise the inventory screen straight away; there's very little difference in operation between the of the games. So what does *Shadowlands* possess to make you consider parting with a tenner? The answer is high involvement playability.

Combat can involve any manner of strategy whether it be in the formation you choose for your characters to adopt or the manner in which they use their weapons. Magik spells are mostly helpful, both offensive and defensive, and as you expect, are vitally important to successful completion of the game. Use them intelligently and with care.

Other neat touches are the ability to see what may be on the other side of a dungeon wall,

which aids planning, and tactics. Torches, which are crucial if you wish to see properly, illuminate less of an area as they burn down; effectively a visual reminder of their condition. Smart one!

Verdict:

Shadowlands, despite the genre being done to death, offers plenty of scope and gameplay to convince you, even if you're not an RPG fan, to part with your cash

STEVE MCGILL

Shadowlands

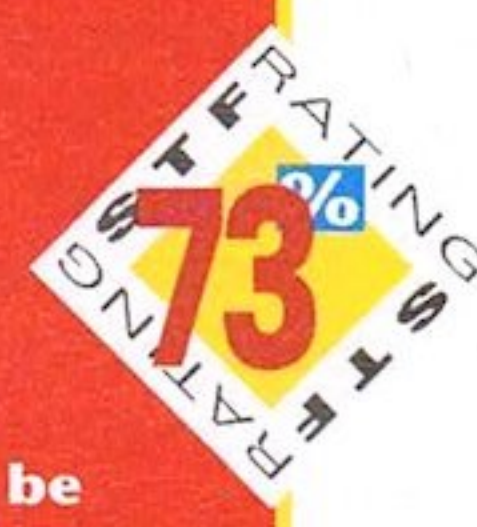
£9.99 Hit Squad
061 832 6633

Highs

■ A refreshing slant on the RPG genre.

Lows

■ How many evil Overlords are going to need to be dispatched until we can all sleep safely at night?



BLUE ANGELS

Wasn't *Die Blaue Engel* a Marlene Dietrich song or film or something? Anyway, who cares. As far as us military fans go, it's a team of American pilots called Hank, Joe Chuck and, quite possibly Pedro.

The idea is a rather a pleasant one. Jim has fixed it for you to fly with the best US Navy formation team in their glistening, slightly phallic F-18 Hornets. Hornet - that's a giveaway for a start.

There are tons of options. You can watch the guys perform their daredevil antics from the ground, or you can practise with

them until you feel confident enough to actually "do" an airshow. This means looking in every direction as they whip around you at speeds in excess of, well, what your ST can handle actually.

The graphics are neat and there's enough to do to make *Blue Angels* absorbing, but it's let down by the tricky controls and the general jerkiness. In one frame, you see exactly where all your ace chums are, then in the next they've gone stooging all over the ruddy sky, leaving you with a face full of hydro-carbons and a scorched helmet.

Verdict

If you persevere for long enough, you might be able to keep within sight of the others as they carry out faultless manoeuvres time after time. But, frankly, it's unlikely. One slip and off they go, huddling together like a gang in a far corner of the sky. It's enough to get you crying and running back to mum.



■ Practise mode gives you this bizarre *Star Wars*-type tunnel thing to fly through. And it's boring.

The slowdown is a problem, and the ground detail isn't particularly superb to justify it. Also, the plane doesn't feel good to fly. Patently nobody from the Hit Squad has got many hours on F-18s.

In fact, as a sim *Blue Angels* doesn't get very far. But the idea is a neat one, and if you are the sort of person that cricks your neck every time the Red Arrows appear at a traction-engine rally, then you might be interested for novelty value. Now why don't they make a traction-engine simulator...?

JAMES LEACH



■ Now this is more like it. Flying in formation with that fellow Blue Angel inches away and cursing you.

Blue Angels

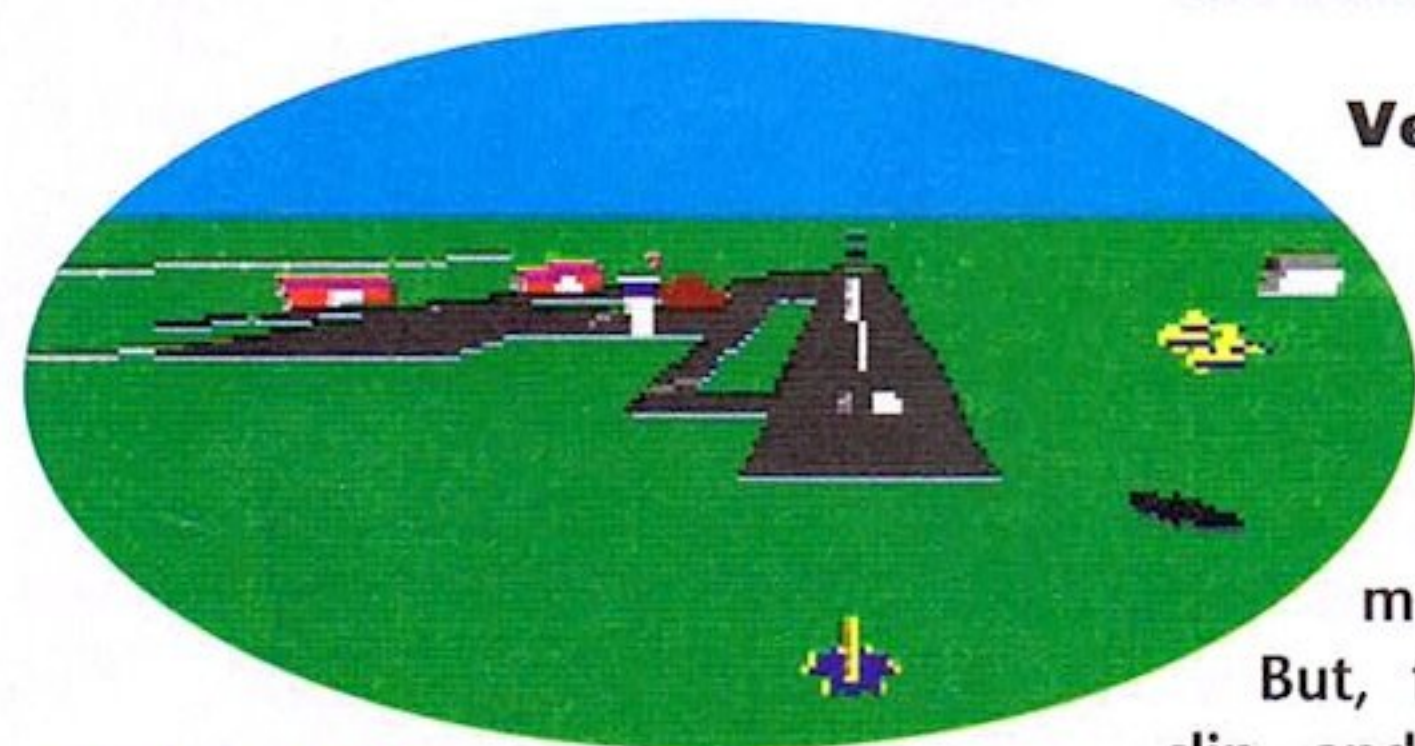
£9.99 The Hit Squad
061 832 6633

Highs

■ A pleasant thrill if you can do it right.

Lows

■ But too jerky, quirky and, er, murky to get to grips with.



■ Pretend to be Raymond Baxter in the remaining Lancaster by talking about the old days and wearing a silly hat.

GUNSHIP



■ The sharp end - blasting the enemy to bits. The trick is to keep low, move quickly and let your main targets have it between the eyes as soon as you are within a reasonable firing distance.

The Apache helicopter gunship has gained an awesome reputation as a engine of destruction. MicroProse have an equally impressive reputation as the creators of realistic and playable simulations. *Gunship*, now released on the Kixx XL label, brings the two together.

The game follows the classic simulation style. You give yourself a

combination of collective and cyclic controls. There are also plenty of keyboard controls to learn - which takes a bit of time. Flying a helicopter is quite a different affair from an aircraft and it can take a while to suss out the crate and the tactics for success.

After a few embarrassing ground-kissing, flak-collecting missions you soon get the hang of popping up from behind hill and ripple-firing hellfire missiles like the best of them.

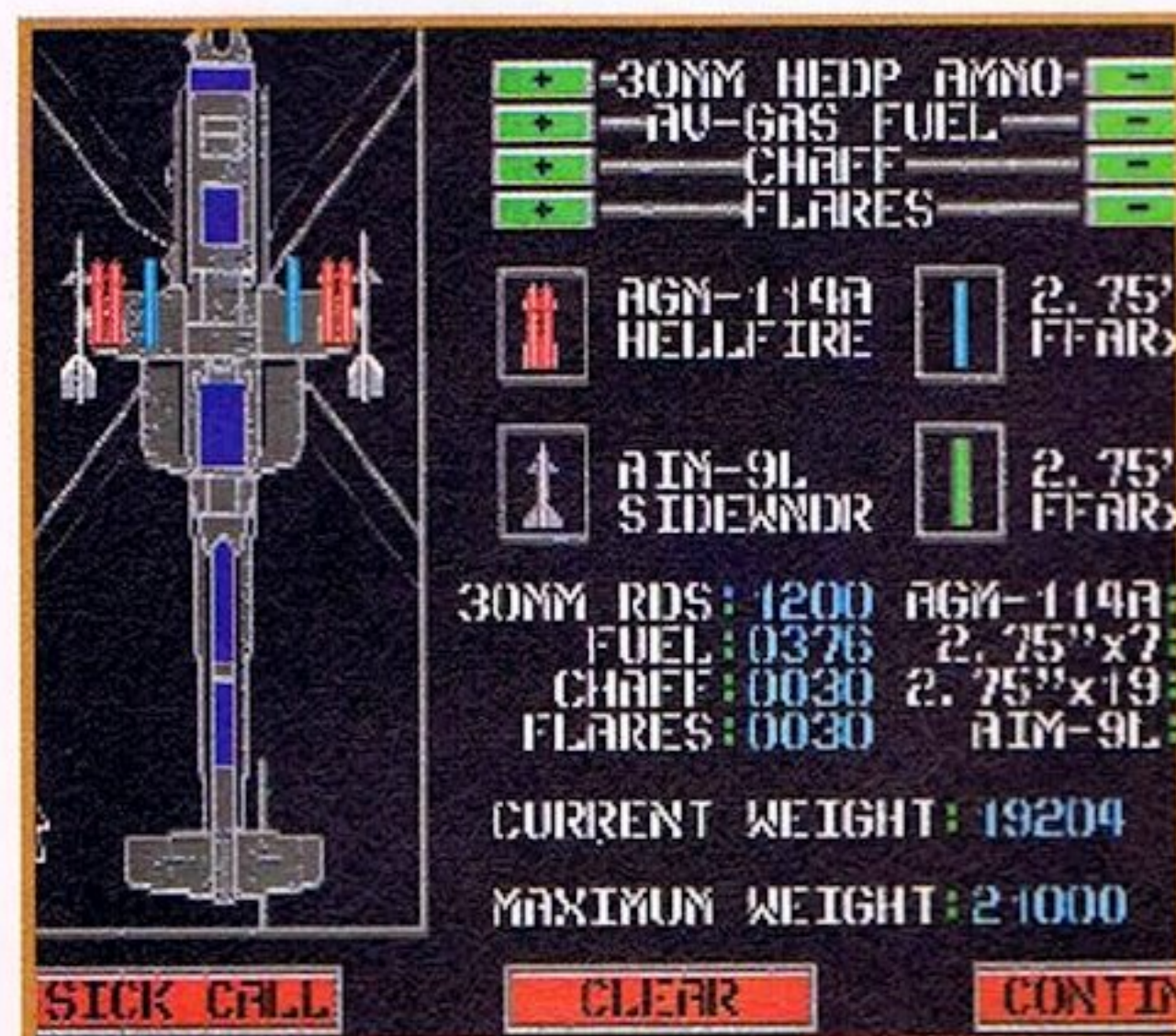


■ The horribly-coloured desert of the Middle East. Apart from the different enemies you meet, each area of the world looks very much the same. A big flat bit with hills scattered about.

hairy name, pick a part of the world to cause trouble in and arm your Apache with a suitable selection of nasty hardware. You can also choose the level of reality and the effectiveness of the opposition. Missions all revolve around the destruction of a target or group of targets. If you do well you get a medal and possibly promotion, that's if your guts aren't spread around some corner of a foreign field. Controlling the Apache isn't easy at first, it uses a realistic com-

Gunship is getting very long in the tooth and the quality of the graphics and sound is poor in comparison with games such as *Thunderhawk*. What hasn't aged is the gameplay, it's still excellent. The helicopter flies realistically and the enemy units and weaponry are authentic enough to make you think you could handle the real thing once you've mastered it. It's far from state-of-the-art but the basic solidness of the game makes it a joy to fly. Get blasting.

CHRIS LLOYD



■ You won't get far without weapons. Different targets need different weapons, so getting the right mix is vital.

Gunship

£12.99 Kixx XL
021 625 3388

Highs

- Realistic helicopter flying and equipment.
- Still very playable.

Lows

- Poor sound and some crude graphics.
- The missions are all very similar.



COMING THIS WINTER!

FUTURE PUBLISHING

PRESENTS

The Ultimate Guide To The Ultimate Games Machine

STARRING

GIANT IN-DEPTH PREVIEWS OF EVERY IMPORTANT NEW GAME - GUARANTEED! EVERY FULL PRICE, BUDGET, CD AND PD TITLE REVIEWED! NO OTHER MAGAZINE HAS THE SPACE OR DETERMINATION TO COVER EVERY NEW GAME IN SO MUCH DEPTH! PLUS! MORE INTERVIEWS, FEATURES, TIPS, BEHIND THE SCENES STUFF AND PLENTY OF OTHER TOP SECRET (BUT REALLY RATHER GROOVY) THINGS WE DAREN'T EVEN WHISPER ABOUT YET. IF IT'S HAPPENING IN PC GAMES, IT'S HAPPENING IN

PC GAMER

First Issue
Thursday
November 11

Hang On.
If You Can.

future
PUBLISHING

STREETFIGHTER 2



Hooray! It's *Streetfighter 2* on the ST... Again! US Gold release the game for the second time at a cheap price – and Andy Nuttall, for one, isn't complaining

Not many games can claim to have changed the history of computer gaming. *Elite* did, about ten years ago, proving that you can squash a space flight cum trading cum shooting game in 20K on a BBC Micro; *Defender of the Crown* did in the early days of the ST, showing that bright, colourful, cartoon-like graphics were possible and include a decent game behind it to back it up.

Streetfighter 2 is the latest phenomenon, partly because it's been released for just about every computer and video game console you can imagine, partly because it was backed up by the biggest hype

campaign we've ever seen, and partly because it's actually a great game.

It's a beat-'em-up – and before the moral minority start jumping up and down worrying about kiddie violence, don't; it's not that bad. OK, so wiggling a pixelated extension of yourself around a screen trying to beat the virtual crap out of your best mate might seem a little callous and anti-social, but rarely do you find a better two-player game. And two player games build up rapport, friendship and brotherliness, right. Right?

So that's it. A two-player head-to-head, with the second player either ST or friend-controlled. Eight characters line up for selection, including a slight young lady called Chun Li, who happens to be as strong as an ox but kicks and punches with much more agility; and



■ Chun Li's got this peculiar (and perverse) way of showing her knickers for no reason. Sounds like a girl I used to know at school, who (snip - Ed.)



■ Dhalsim unleashes the power of his foot odour to destroy his enemy.



■ Look behind all the action and you see a strange yellow man in red slippers. Who is he? What is he?

Dhalsim, an old fart with bendy arms and a penchant for yoga. The others are pretty much rip-roaring macho men – oh, except for Blanka, that is, who is yellow and therefore obviously not human. But he is pretty macho.

Play *Streetfighter 2* in one-player mode, and you find yourself playing against one of eight players, which are different again to the first eight. (Confused yet?) These are effectively the difficulty levels, because you work your way through them one-by-one,

and they get progressively harder to beat. All 16 players have their own personalities and abilities, including Special Moves.

Each character has at least one Special Move, which could involve twirling your legs above your head menacingly (Chun Li), creating a burning, um, fireball known as Yoga Fire (Dhalsim), or electrocuting your opponent with 1,000 volts (Blanka). They are all pretty deadly, and bloody difficult to put into practice – each involving a different combination of joystick moves and keypresses. After a few games it becomes second



■ A swift glance at the image above seems to convey a power struggle between the good people of... my, hasn't the man on the left got large breasts?

■ And the one on the right doesn't seem to have any hair. Just a few sort of lumps on his head. Perhaps his mother's a phrenologist...



■ Oh, yes – back to the captions “proper.” Guile (on the right) tries to stick his foot in it (Dhalsim's head). Big D can stretch his limbs though, so he can reach his target easily.



Streetfighter 2

£14.99 Kixx XL
021 625 3388
Needs 1MByte RAM, and TOS 1.04 or greater.

Highs

- Amazingly accurate coin-op conversion.
- Great for getting rid of tension.
- It's out on budget already.

Lows

- Some less intelligent kids might try to use the moves at home, as “proved” by *World In Action* on the TV.
- Don't listen to them.



WORLD CLASS RUGBY

FIVE NATIONS EDITION

Grown men rolling about in the mud chasing after an odd shaped ball. Sounds like fun



Ah, remember the happy days of the Five Nations Rugby matches at Murrayfield back in those school years. The tickets cost 50 pence which was a pittance even back in the dark, prehistoric days of the early '80s and you got to sit in the schoolboy enclosure, which were a few rows of benches which were actually in front of the terrace fences, right on the edge of the pitch.

It was impossibly stirring, you got to sing all manner of rude songs at Dusty Hare and Bill Beau-

"A highly playable game, a superb simulation of the sport"

mont without getting a clip round the ear from the teacher because he was singing louder than any of you, but the best bit of all was at the end, when about 50 stewards would attempt to stop several thousand highly excitable kids from rushing onto the pitch in that slightly pointless and unfathomable way that they always do at the end of rugby matches. Sadly, that particular section of

the proceedings isn't simulated in *World Class Rugby*, but it's pretty much the only thing that's missing.

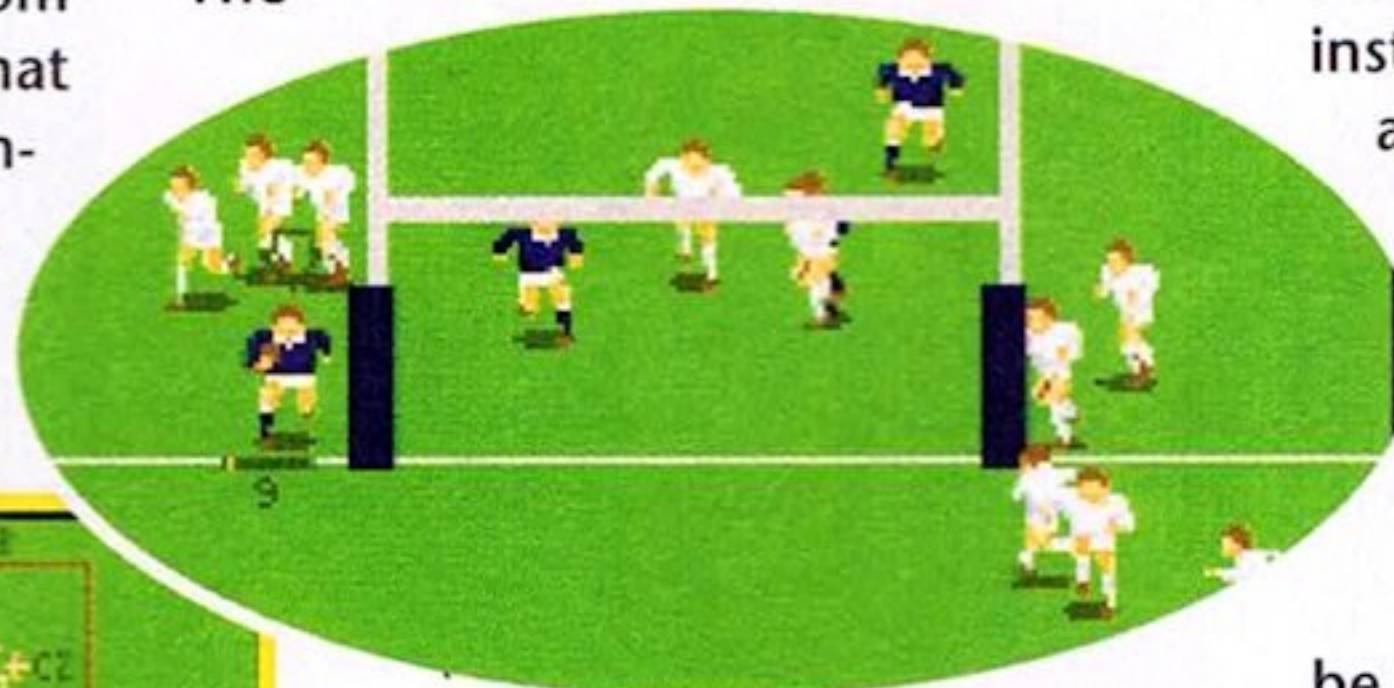
Several people have tried to claim that this game does for rugby on the ST what *Kick Off* did for football, but that's being terribly unfair to it - this is, as well as being a

■ This is the standard everyday run-of-the-mill overhead view. It's OK, but not very glamorous.

highly playable game, a superb simulation of the sport, and as accurate as you hope a computer rugby game to be.

It's got tactics, there's a wide selection of American Football-style preset moves that appear in set-piece situations, speed, and even a meaningful physical aspect, as you have to waggle the joystick rapidly to win scrums and rucks. Like real rugby at its best, *World Class Rugby* plays like a mix of football and American Football, with all the free-flowing unpredictability of the former and the grunting primal face-offs of the latter.

As well as being a great simulation of rugby and a highly playable game, *World Class Rugby's* even an accomplished piece of computer software in its own right. The



■ The English defence look nonchalant as Gavin Hastings runs in another five-pointer in 3D mode.



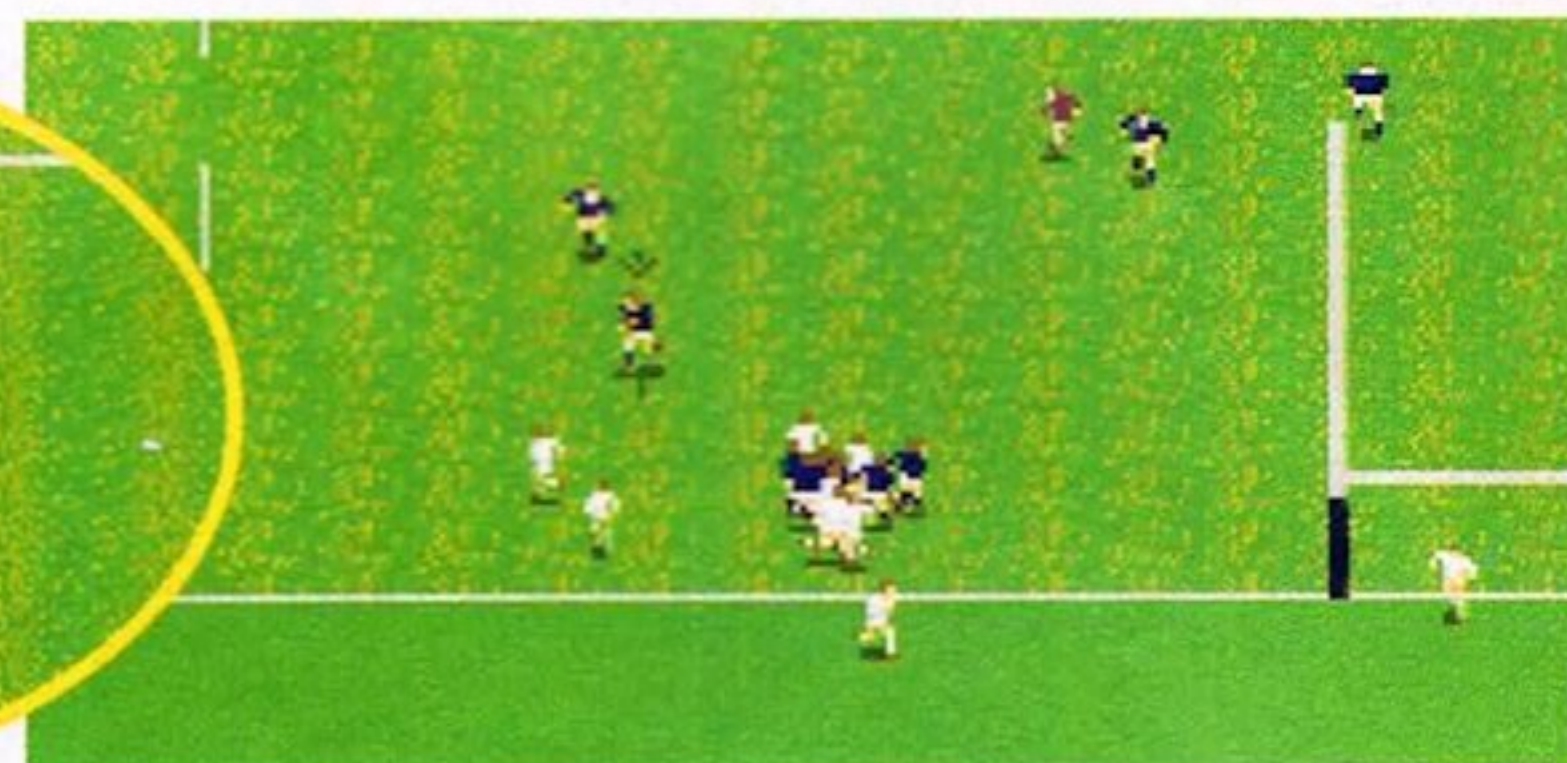
■ Experiment with all manner of clever plays here, before giving up and simply running it in at the corner again.



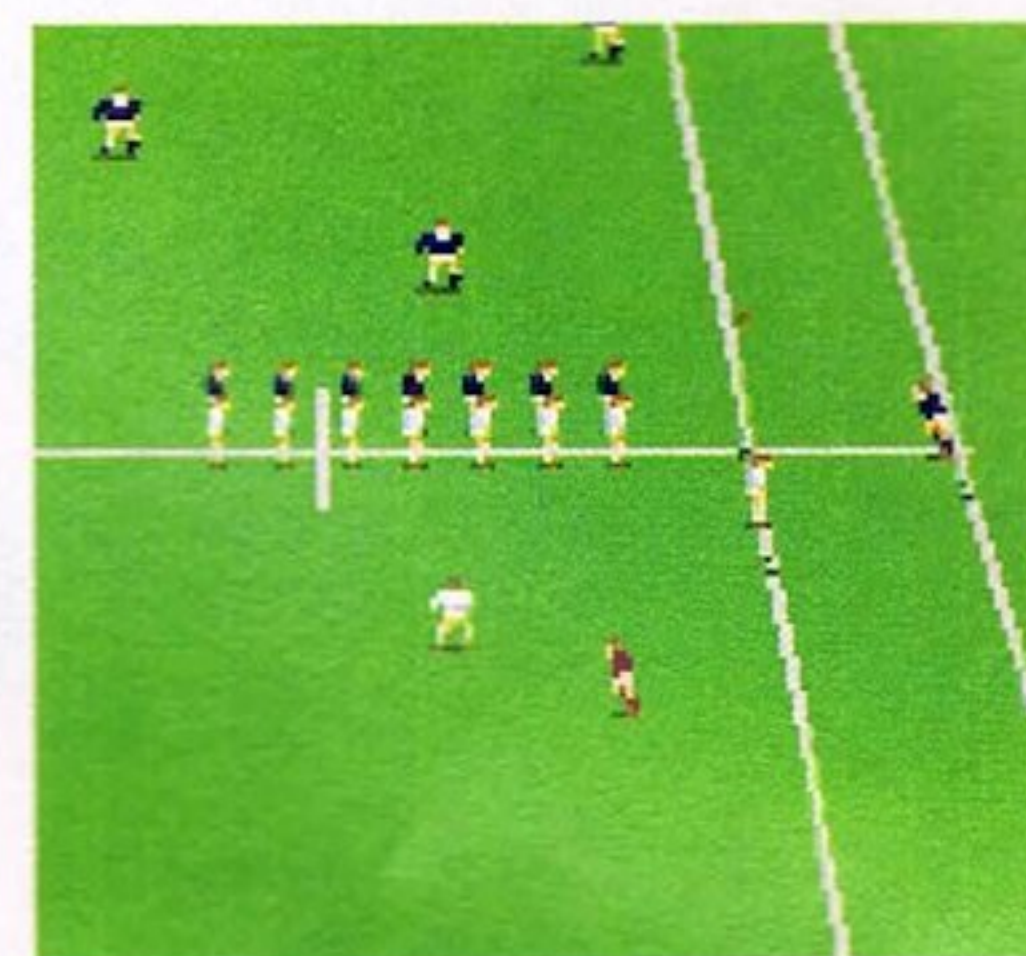
■ You can't really tell, but this is a shot of the action replay facility in, er, action. Honestly, it is.



■ We're on the march with Ally's Army, we're going to the - I'm sorry, I don't know what came over me then.



■ This is the view from the Goodyear airship. In this mode, the game feels more like *Sensible Soccer*. Er, except that it's rugby.



■ This, however, is the blimp view cunningly combined with the 3D perspective. This isn't getting too confusing for you, is it?

graphics are chunky and solid, presentation is pretty and easy to follow - compared to some sports games, especially football management ones, which are so desperate to look slick and sexy that they cover the screen in totally incomprehensible icons which you have to keep looking up in the manual to make any sense out of the game.

You can view the action from any of three viewpoints (top-down *Kick Off* style, a lovely 3D *John Madden Football* lookalike, or a *Sensible Soccer*-esque blimp view, where everything's really tiny but you can see a big area of the pitch at once), all of which scroll in eight directions to fine effect. The controls are instinctive and very easy to grasp, and there's even a four-player mode if you've got a joystick adaptor. But hey, that's enough gushing, let's be balanced and professional and look at the downside.

Damn. There doesn't seem to be a downside. Perhaps £14.99 is a bit steep for a budget game these days, but when you look at the quality of most of the ones around at the moment, an extra fiver for something of genuine quality like this is a small price to pay. This game is enormously likeable. It's far and away the best rugby game ever seen on a computer (and

indeed, a recent conversion to the SNES sees it tying up the console market as well), and probably one of the top three sports sims full stop. Why not give it a try? Sorry.

STUART CAMPBELL

World Class Rugby Five Nations Cup

£14.99 Audiogenic
081 424 2244

Highs

■ I said it was great. Weren't you listening?
■ Go out and buy it.
■ Now.

Lows

■ Absolutely none.



NIGHT SHIFT

For once, a game with a story-line which actually ties in with the game! The Industrial Might and Logic company have the unenviable task of producing the small plastic *Star Wars*™ and *Indiana Jones*™ figures sold to parents at extortionate prices at this time of year. And you've got to help them (back out now, if you've got any sense).

The machine to make 'em is called Beast, a monolithic engine capable of automatically turning resin into said dolls, as long it's attended to and gets a steady supply of electricity. It's very tall, so as you may expect reaching the top of it involves jumping up a series of platforms and conveyor belts.

When you start work you have to hope that the earlier day shift have left Beast in good work-

ing order, but invariably (and more so as you move up the levels) they haven't - bolts are loose and plugs are left hanging out. So, your first job is to put all of these right. Each half of Beast makes either the head or the legs of the dolls, so you also have to make sure the conveyor belts are going the right way to make the dolls the right way up - otherwise you end up with two-headed Imperial Stormtroopers...

Jumping on the bike, then wagging the joystick left and right creates electricity for Beast - the faster you pedal, the more electric-

ity flows through the machine. You have a quota of dolls to make in each level, and the faster the machine produces them the more bonuses you receive.

Verdict

So, *Night Shift* is a bit like the old spinning-plates trick - as you put one thing right with Beast, something else goes wrong. You have to keep your eyes peeled for warning lights, resin being dumped in the waste bin, deformed dolls and broken bolts. But no matter how hectic things get, the control system acts beautifully - you won't find frustration with the joystick or keyboard commands.

The one niggle is that disk one is labelled Disk B, and disk two is Disk A; while the program sometimes asks for disk three which is Disk A again - come on Kixx, get your act together.

Aside from that, *Night Shift* is



■ Glazed eyes, half-open mouth - dead giveaways for a worker "on the job." Needs a spade to lean on...

a polished and highly playable program, exactly what you expect from LucasArts.

ANDY NUTTALL

Night Shift

£12.99
Kixx XL
☎ 021 625 3388

Highs

■ Plenty of variation keeps you on your toes.

Lows

■ Finding parts of the machine can be difficult.



■ IML - Industrial Might and Logic. A pun on LucasFilm's special effects department Industrial Light and Magic. The whole game's littered with Lucas references, in fact. Sad, really.



THE ADVENTURES OF ROBIN HOOD

Rest assured, during the course of this review you're not going to have to read any puns about Weetabix or Kevin Costner. Oh no. The next 300-or-so words are going to be prime, tip-top, intelligent words chosen to describe the good Robin and his pals going about their business in Sherwood Forest.

Robin's game world is displayed in isometric 3D, which scrolls around à la *Powermonger* and *Populous* - and because the land's mostly lush and green, it

could be easily mistaken for either of those two games. It's not as good as either.

You're not given any instructions at the start of the game, which is good in a sense because you're really dropped in at the deep end. There are enough clues spread throughout to keep you going, but most of the time you're left to your own devices. If you want to shoot people with arrows you can; if you want to talk to or side with baddies, you can do that too (this seems more like a Bullfrog game all the time).

Your main task is to be a hero. The people of Nottingham regularly ask you for help in getting rid of raiders, or robbing the rich and giving to the... yes, you know the type of thing. If you bum around doing nothing, they won't kill you or anything - they just shun you, and shout things like "fine hero that Robin Hood turned out to be," to each other. This ought to be enough to get you

■ ...Oh, blimey. What to write? Er, here goes. Ahem. "This guy's a bit tall, isn't he. Obviously not Little John, then. Although, maybe somebody's been pulling his leg. Ha."

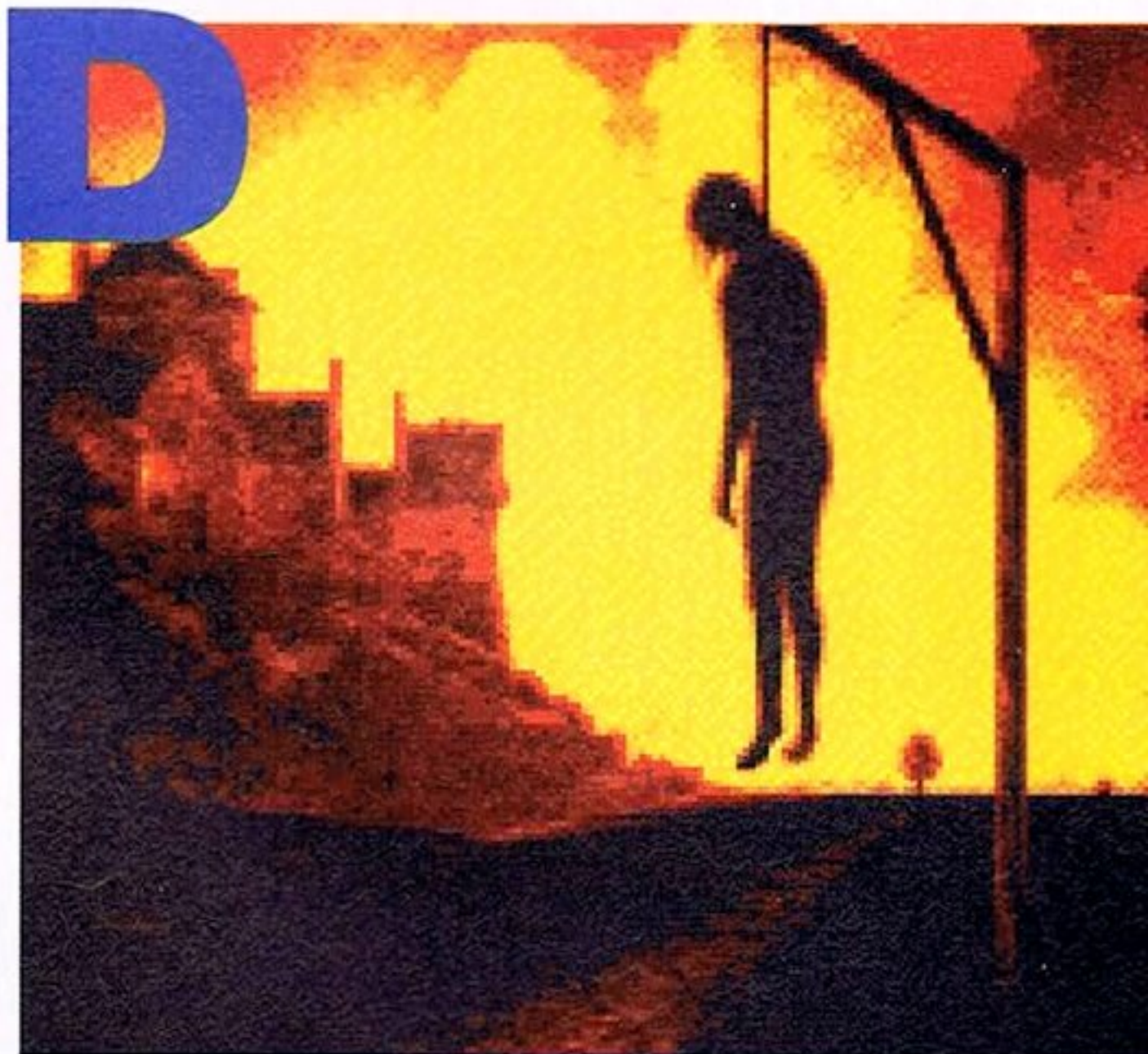
going, and then all of a sudden they love you again...

Verdict

So the game content isn't bad, the graphics are OK, and the layout is good, even; but the scoreline at the bottom of this page reads 58%. Strange, eh? No, because the game controls and speed are the problems. Moving Robin around is a chore, using arrow keys because the preferred method of pointing-and-clicking on a spot just doesn't work. The scrolling's pretty quick but the characters move horribly slowly, and after a while you just won't want to bother. Tracking characters down and talking to them is difficult, because they mostly don't want to stop - incredibly frustrating.

It is a grower, though - if you can stick it for the first hour, you'll be there for quite a few more.

ANDY NUTTALL



The Adventures of Robin Hood

£12.99
Kixx XL
☎ 021 625 3388

Highs

■ Lots to do, places to go, people to see.
■ Great still graphics in-between seasons.

Lows

■ Real world system is just too slow.
■ Weetabix, Weetabix, Weetabix.



■ Tiny sprites, tiny castles: "Tiny is as tiny do," as they say. Or do they? Certainly in Robin's world they seem to. God, this caption's boring. Still, there's always the one over there...



WALZ

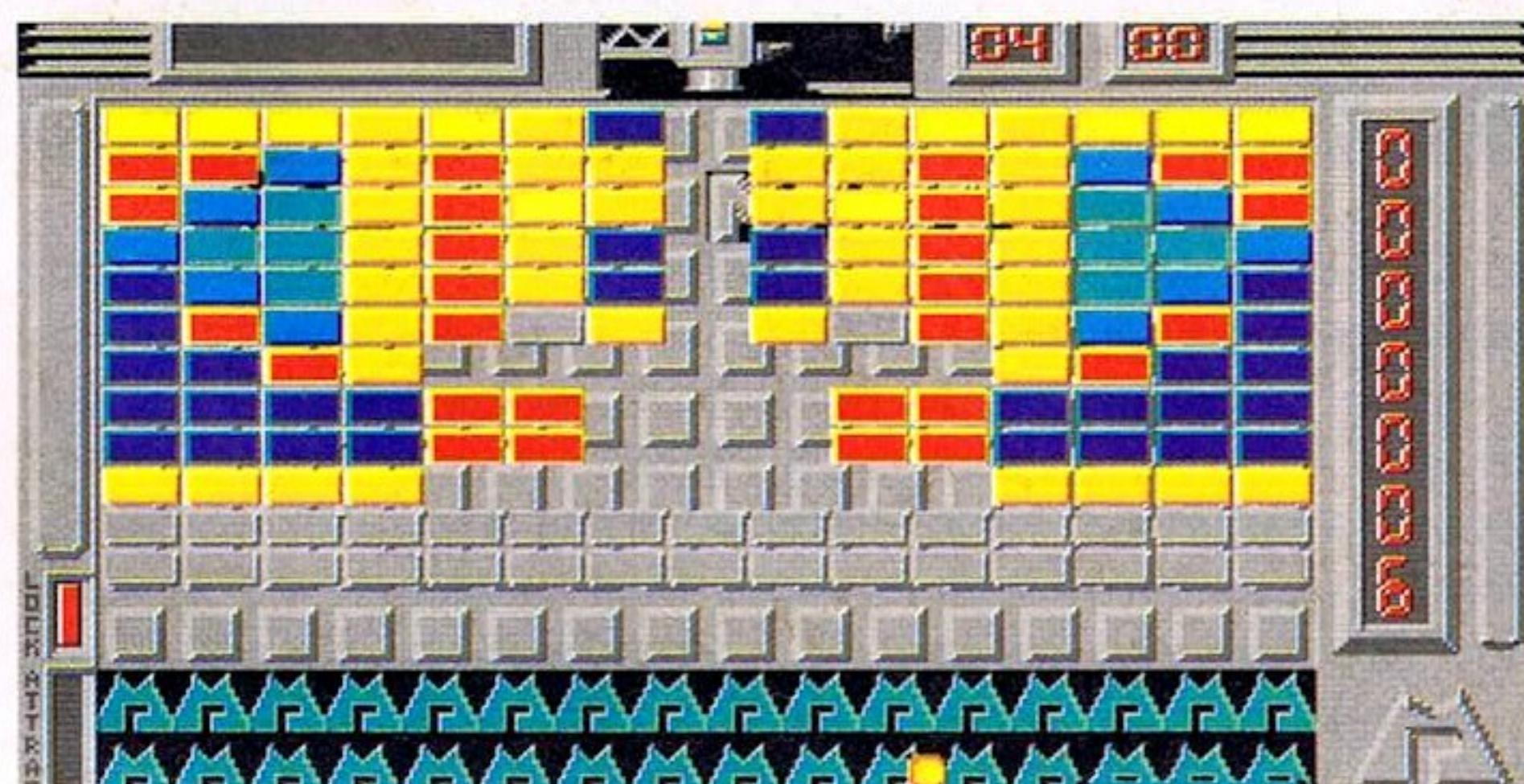
Hooray for mid-'80s coin-ops!
Can the umpteenth ST version of
Breakout **offer anything new?**

Ageing arcade games always go through a revival stage, with a conversion to the ST and a "classic" label – *Defender*, *Robotron*, *Space Invaders* and *Pac Man*. Most old coin-ops become in vogue once again, and game-players buy them in droves to recreate nostalgic periods in their youths.

Breakout's been there more times than most, with both straight conversions of the arcade game, and offerings which break the original boundaries and actually add something to the game – *Arkanoid*'s a good example here. There hasn't been a *Breakout* clone released since the birth of ST FORMAT, so it's a bit of a surprise to see this...

Enter *WalZ*, stage left.

It's too expensive. Before the review even begins, before we even



■ Now this really is just so ridiculous. This is one of the tables supplied with *MasoN*, the game creator, and it supposedly makes things more difficult because of the use of colour. Clever, eh? Er, no. Not at all, actually. It's just downright frustrating.

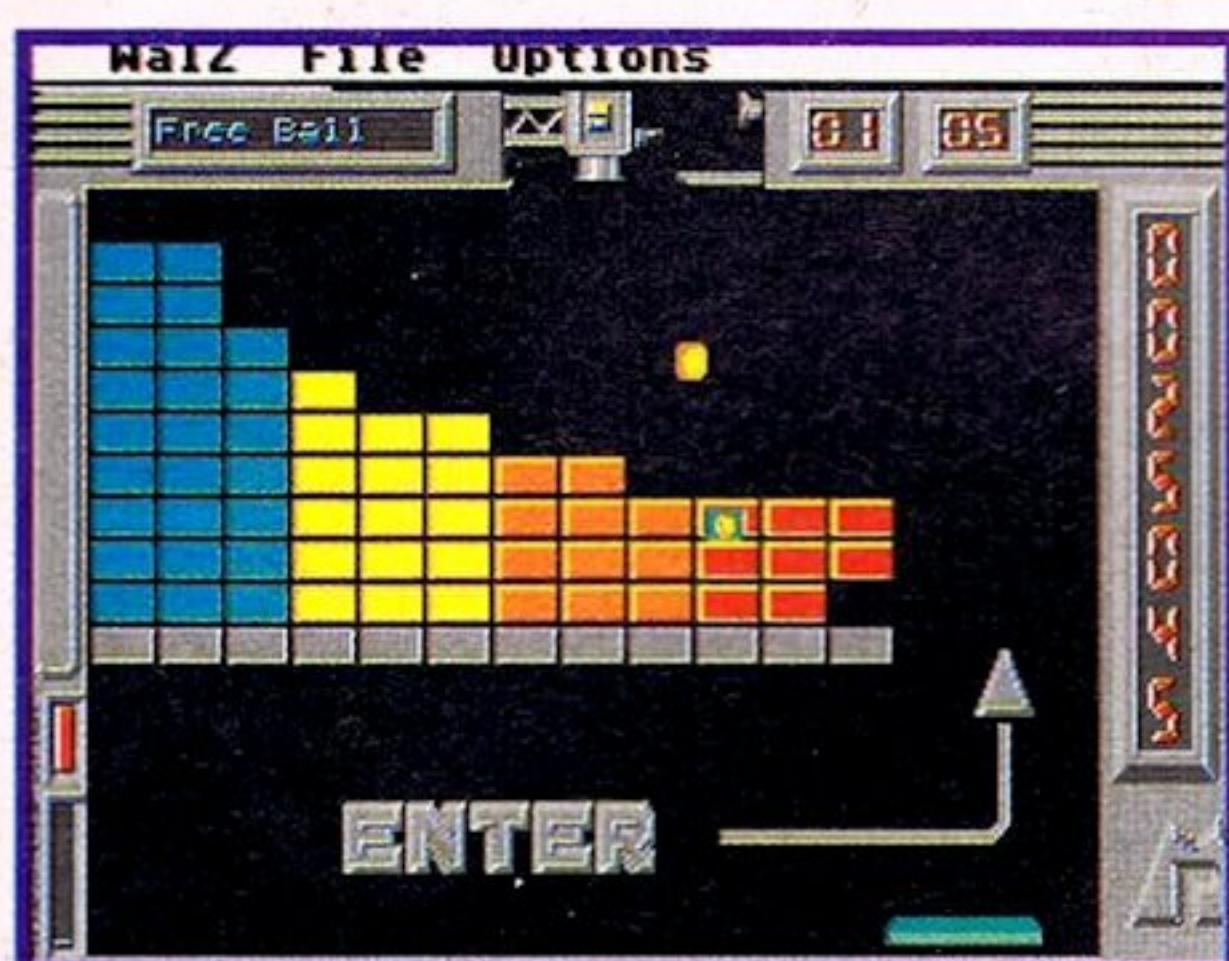
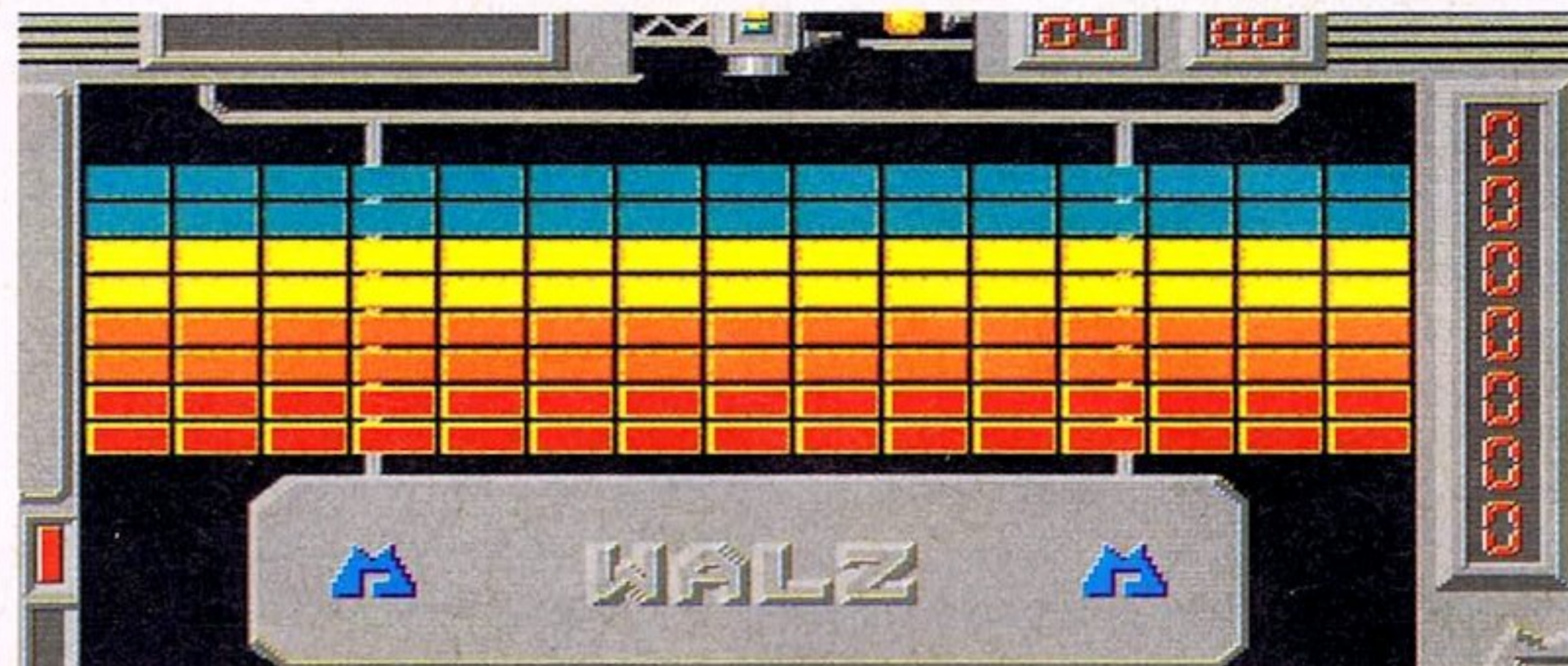
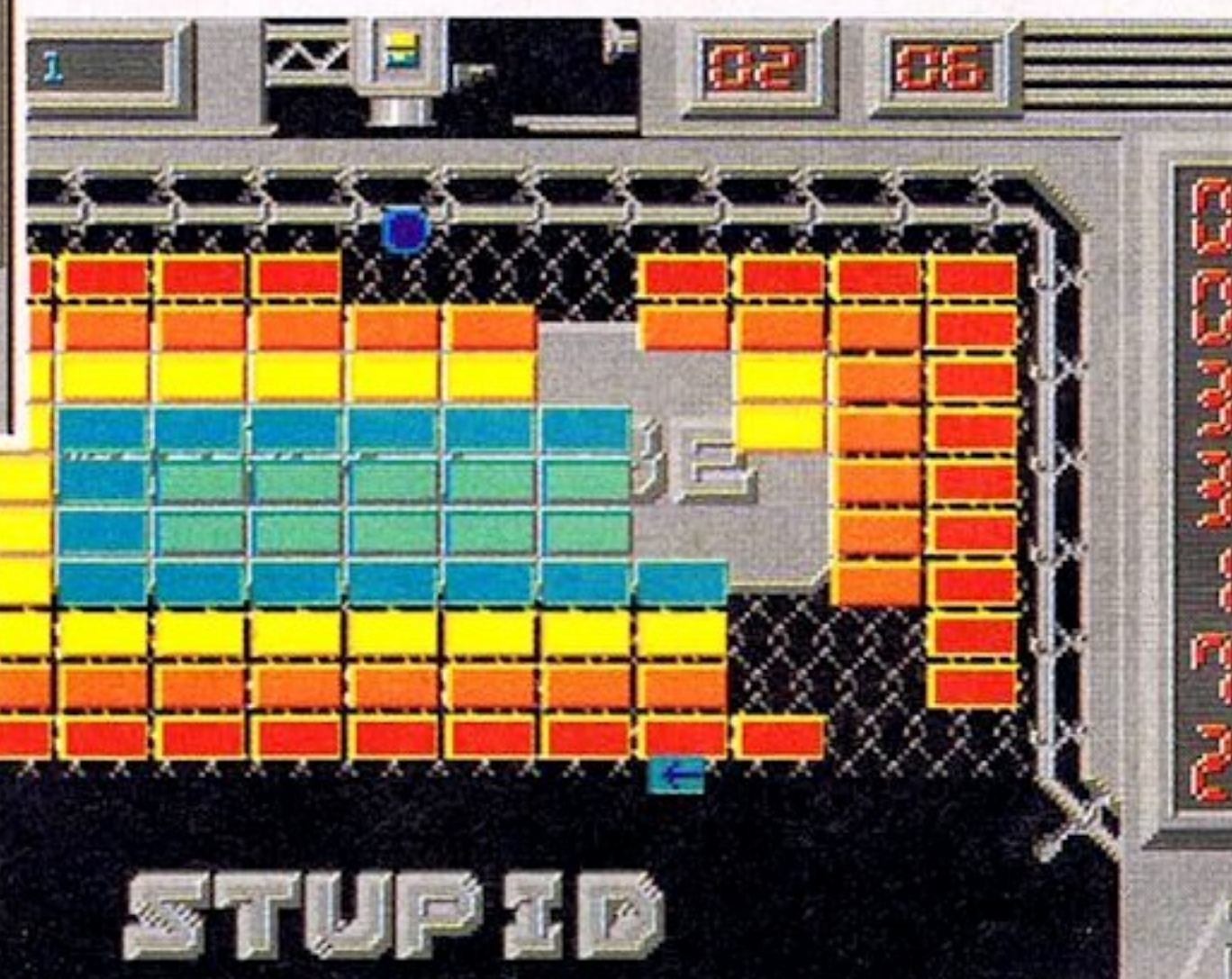
load up the game, £19.63 (US\$29.95) is way, way too much to ask for any kind of *Breakout* clone. Maybe the North American market can stand this kind of prices, but when CWest release this in Europe they need to seriously rethink their pricing strategy.

This is compounded by – yes, sorry, negative vibes are flowing –

"The first word that enters your head is "Why?" or more accurately "Why now?" It's a mystery"

the fact that *WalZ* is not even a very good conversion of *Breakout*. There are a few frilly additions, such as "goodies" which float down from certain bricks and give you

■ Including small, almost subliminal phrases which dog the poor person who buys this game. The words "Don't be" are hidden behind the bricks, but the point still stands.



■ The backgrounds are great, because you can leave messages around to guide the player. "Enter." That's an informative one. Never would have thought of that.

MASONIC BODGE

The blurb on the cover of *MasoN*... Well, here's an example: "*MasoN* is a powerful, easy-to-use tool that enables you to bring to screen the wildest, fiercest, most creative playfields your imagination can unleash!" No it's not! It's a kind of paint package which you can use to create new walls of bricks to knock down. Whoop-de-doo!

You can create both "foregrounds" and "backgrounds," it seems. That means the paint package not only enables you to slap bricks here and there on the background, but also create a pretty pattern in the background which – get this – doesn't even have an effect on the game! Selling *MasoN* separately is really taking the mickey. Included with the *WalZ* package, this may have raised the percentage a bit – but it isn't, so it hasn't.



■ Ah, the "game creator" itself... Entire games can be created here, and saved to disk. Simply load the results into *WalZ*, and hey presto! Instant boredom.

special bonuses and powers, but they only add a certain amount of interest to the game. There's also a mode called "English," where the direction and velocity of the bat have an effect on the movement of the ball. A good idea, but to have an effect the bat has to be travelling fairly quickly – in which case you normally miss the ball completely. And why's it called "English?"

The goodies can make your bat grow or shrink, make the ball stronger or disappear completely, finish a level or kill you off at a stroke (if, indeed, you can "kill" a bat.) This idea was introduced in a game called *Arkanoid* now available from the budget label Hit Squad in the late '80s, but then everything in that game was so much more polished than in *WalZ*.

The first word that enters your head when playing *WalZ*, if you either order it from CWest or wait for it to be distributed in the UK, is "Why?" or more accurately "Why now?" Are they expecting a

■ Bat. Ball. Bricks. Use the bat to hit the ball to knock the bricks out of a wall... Knock all the bricks and you move to a different screen with a differently-shaped wall...

rush of interest in early '80s coin-ops? Do they really think they can sell any at just under 20 quid? It's a bit of a mystery.

The *Breakout* elements are average, while the goodies and English mode don't add very much. Buy *Arkanoid 2* – it's over a tenner cheaper, and a whole lot better.

ANDY NUTTALL

WalZ

£19.63 (US\$29.95)
 Computer West
 ☎ 0101 805 546 9036

Highs

- Goodies fall from the sky.
- Whole new mode of bat operation.
- Hmmm, not a lot, really.

Lows

- Dull, dull, dull. Nothing new, everything bloody old.



KNIGHTS OF THE SKY



Flying a flight sim is, in a twisted incoherent sort of way, rather like driving a car. At first you're daunted by the banks of instrumentation you have to deal with, but once you get going you find there are really only two or three things to

■ As usual there's a plethora of external views. Why didn't they put some decent engines into these bloody planes?



■ Well, we're in the air at least, but we seem to be heading straight for one of our own hangars. Obviously not intentionally - it's a bit of stunt flying. (Ahem.)

remember. Like changing gear... no, this metaphor isn't working.

What we're trying to say is that they're too easy. You simply lock a missile on a target and let it go, then find the next. Not so with *Knights of the Sky*. Here you get to fly real aircraft, those crappy old biplane things they had in the First World War, where the controls are simply stop, go and fire. There are no no AMRAAMs and SAMs, and certainly no KREBs (that's because we've just made that up) - just you, your plane and your guns against the vile German menace.

So, choosing from 20 top of the range aircraft (some even with wings), it's, er, chocks away, out into the wild blue yonder and so

on. The missions are simple: bomb the German airbase, shoot the German aces, disrupt the German supply lines, listen to the German stereotypes, using flying skill and tactics rather than weaponry.

The 'Prose (as we call them) haven't tried to be clever graphically, sticking instead with basic polygonal shapes and ground detail, so the game doesn't chug horribly but looks pretty good too. Admittedly certain blobs which are supposed to be, for instance, hangers, bear a remarkable resemblance to.. well, a blob, but hey, who cares when you're filling the Hun full of lead, as it were? The point is that the gameplay's closer to that grass roots skin of the edge of the teeth feeling than most other sims can manage, because you've got no high-tech nonsense to fall back on.

Verdict

Good clean anti-German fun all round, and for less than the price

■ And that's it, is it? That's the plane we've got to outwit the entire German airforce in, is it? And stop looking so flamin' smug, for God's sake.

of something that costs £17. (Sorry, my similes are out of the window today too.)

ED RICKETTS

Knights of the sky

£16.99 MicroProse
☎ 0666 504326

Needs 1MByte. Hard drive installable

Highs

■ Back to basics aerial warfare, easy to get into, lots of missions.

Lows

■ Not particularly inspiring graphics, fairly slow.



HOOK

It's going to be one of those days. Your children have been kidnapped by a nasty pirate with revenge on his mind, you think you might be Peter Pan, and all the help you've got is a fairy who only exists if you believe in her.

Neverland. A magical island where no one grows up. Where you took Wendy and her family to do battle the first time in the book. Now you have to return to Neverland to rescue your family from the dastardly Hook.

The feel of the game is almost cartoon-like, due mainly to the

graphics. Don't think that just because you saw the film that you know what to do - most of the characters and situations here weren't in the film. To find out what items are useful in an area, you have to examine everything yourself because you get no assistance from the screen display. Tinkerbell can sometimes help you if you're really stuck, but her comments are cryptic and often apply to something you've already done.

At many points during the game you feel like screaming, especially when you've worked out what to do but just can't get the timing right. The talk icon gives you a choice of ques-

■ A less law-abiding citizen than Peter Banning would nick that jacket and stuff. Not Peter though, he's hardworking and respectable.



■ "Yes, I have to agree with you, green certainly does bring out the pirate in you." "But don't you think purple with pink accessories would suit me better?"

tions or comments to say. These don't seem to change once you've said one of them, and some are re-used during the game, giving an air of déjà-vu to the play.

Verdict

Hook never sucks you in entirely. There are so many petty annoyances to distract you from the atmosphere that you never seem to get involved in the game. The control system is unwieldy and detracts from the gameplay.

With *Monkey Island* also out on budget, *Hook* looks like the poor relation and pales beside its rival.

SARAH TANSER

■ The party's really swinging here, isn't it? It's just like my Aunt Mabel's 90th birthday bash, only she died in the middle of it.



Hook

£9.99 Hit Squad
☎ 0061 832 6633

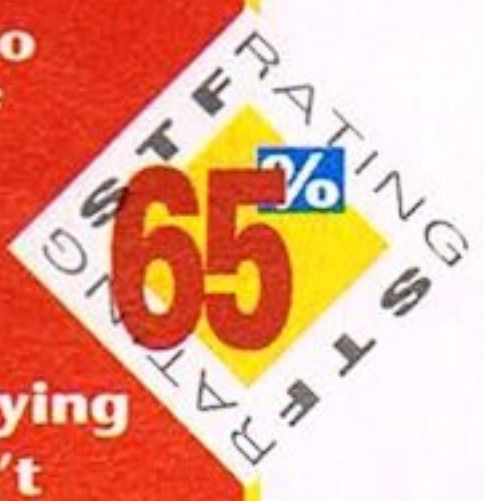
Three disks
Requires 1 MByte

Highs

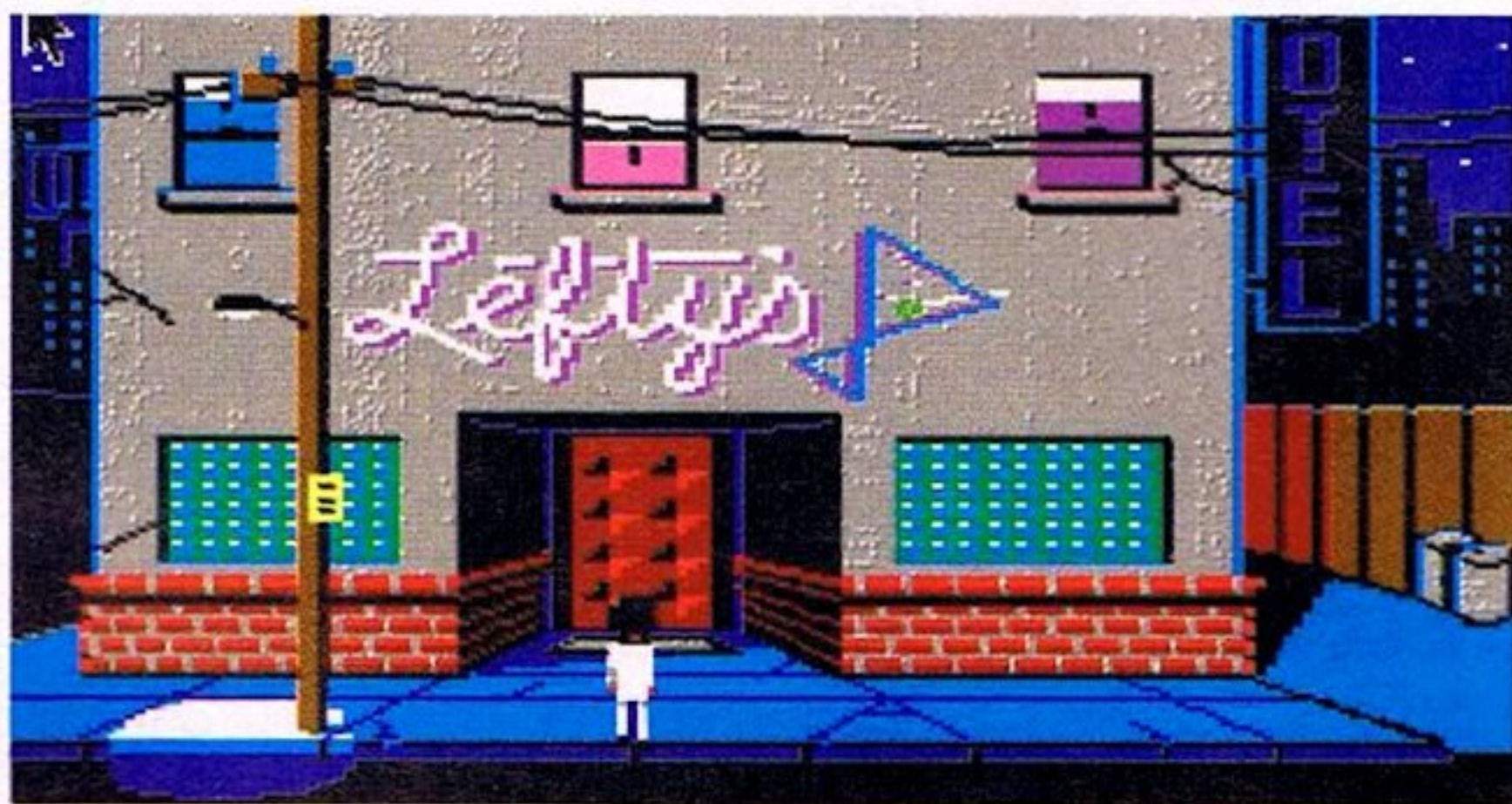
■ Cartoon graphics and obscure tasks make this a good way to waste a couple of evenings.

Lows

■ Limited control system gets annoying and the game isn't good enough to absorb you into the plot.



LEISURE SUIT LARRY



■ This looks like a fun place to go on a Saturday night. A neon sign and bars on the windows it looks like a *The Hitman* and *Her* night-spot.

Leisure suits, eh? Perhaps it's one of those attractive ecru-coloured outfits you see advertised in the *Mail on Sunday* colour supplement and worn by the pre-menopausal shoving their trolleys round Sainsbury's. Or is it that hideous fashion blunder, the shellsuit? Well, not

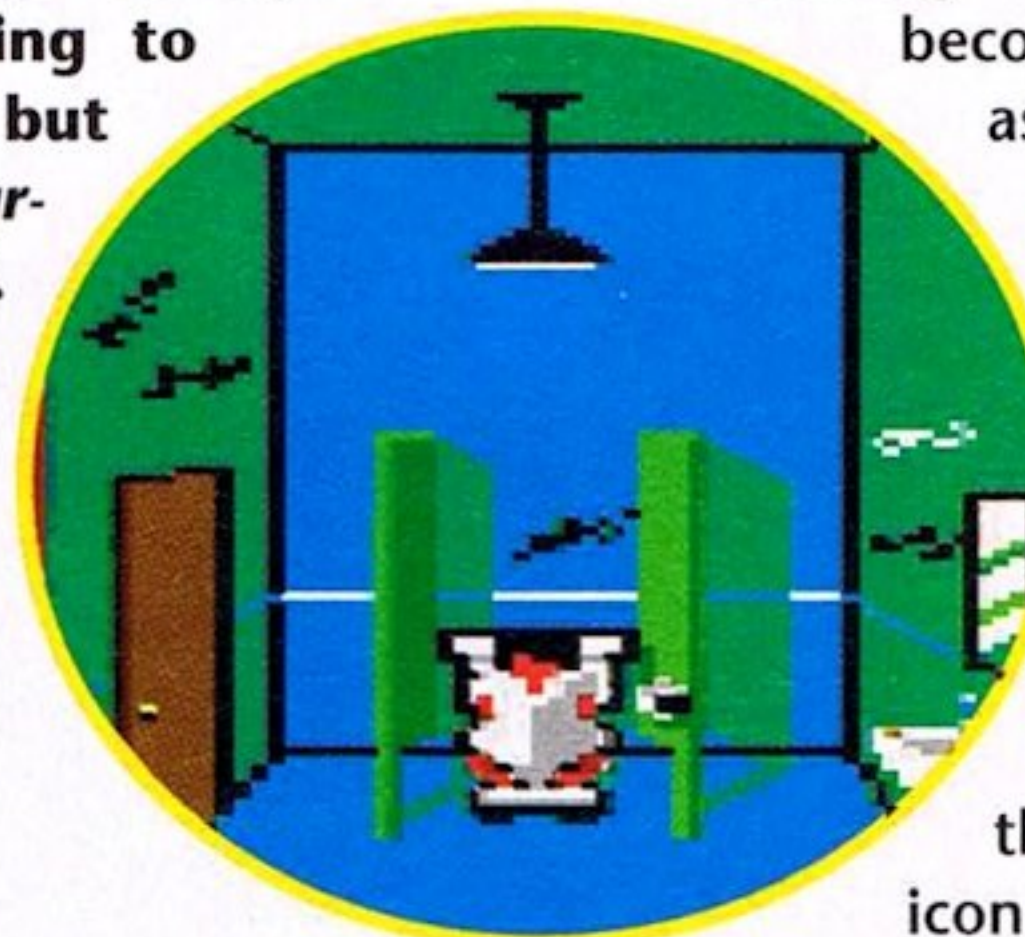
this leisure suit. This one houses Larry, the man about town, who's desperately trying to look like Noel Coward but looks more like a *Saturday Night Fever* cast off. Medallion and all.

Larry's certainly been around – in more

ways than one. He graced our monitors in the late '80s and reappears in the budget range. *Leisure Suit Larry* is an adventure game and you, as Larry, explore clubland, drink whiskey and try to off-load your large levels of testosterone.

The game must be played in sequence which is quite tricky as it's all so nonsensical. You control Larry with the mouse – which is a little oversensitive – activating various icons and collecting objects.

Walking Larry about becomes tiresome as you never



■ Larry taking a short rest from the dance floor.



■ Larry turns the hot-shoe shuffle into an art form – but the gal at the bar remains unimpressed. Better luck next time, Larry.

get close enough to the relevant icon or object – his drunken swagger probably doesn't help matters either! Another frustrating thing is that is so easy to die – these guys ought to take a tip from LucasArts who've got adventuring sussed. The music is of a "stylophone nature" and you are never quite

sure whether you're listening to *When the saints go marching in* or *By the rivers of Babylon!* But hey, what does it matter?

Verdict

Leisure Suit Larry is harmless fun, but not for you if you're elderly, of a weak disposition, a raging feminist or under 18. These budget games usually sell well, and if you like this then you're in for a treat as there are a few more versions to come. Invest your money in the *Secret of Monkey Island*, instead. It's fun, a lot more challenging, and a beautifully polished game.

DEBORAH COOK

Leisure Suit Larry

£12.99 Kixx
021 025 3388

Highs

- Fun for a short time only.
- Adult sense of humour.

Lows

- Can be quite sexist.
- Slow gameplay, crap controls.

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HOYLE'S BOOK OF GAMES



■ How could anyone in their right mind refuse such a tempting array of games, eh? If Sierra were really desperate they could bill them as "Virtual Reality Card Games."

Oh, how interesting. As if playing an ancient and dull card game with real people (as real as the people you know are, anyway) wasn't bad enough, *Hoyle's*

gives you the chance to play them against ST people. The devastatingly exciting games on offer are *Old Maid*, *Hearts*, *Cribbage*, *Klondike*, *Crazy Eights* and *Gin Rummy*. Come on, who can honestly say that they can't recall with a tear in their eye some crazy night spent playing *Old Maid* over a pot of tea 'till, ooh, midnight? Exactly. Couldn't they have come up with some better games?

But never mind, we have to play the hand that's dealt us. (Supreme apologies.) All the games are played against a back ground which can frankly only be described as green, with some horribly cute graphics of the other players to liven it up (I think that's the inten-

tion). And wouldn't you know, some of our old friends from Sierra's games. Look, there's Princess Thing out of the *King's Quest* series! And there's *Leisure Suit Larry* again! And listen, they're making some amusing comments! Goodness what fun this is. Just watch as that card jerks awkwardly from one pile to the next and a bit of scraggly text appears. Goggle inanely at the amusing card designs. Laugh even louder as you switch off the ST and play poker with some real folk instead.

To put all the cards on the table, then (sorry, I really must stop this now), *Hoyle* can keep his book of games – more of a pamphlet than a book, really – and Sierra may as well give up trying to sell this load of rubbish even at budget price. Invest in a pack of cards instead.

ED RICKETTS



■ Ah. Our opponent appears to be a dog, and a talking one at that. He's extremely good at cribbage too, and that's certainly not something that you do every day.

Hoyle's Book of games

£12.99
021 625 3388
Hard drive installable.

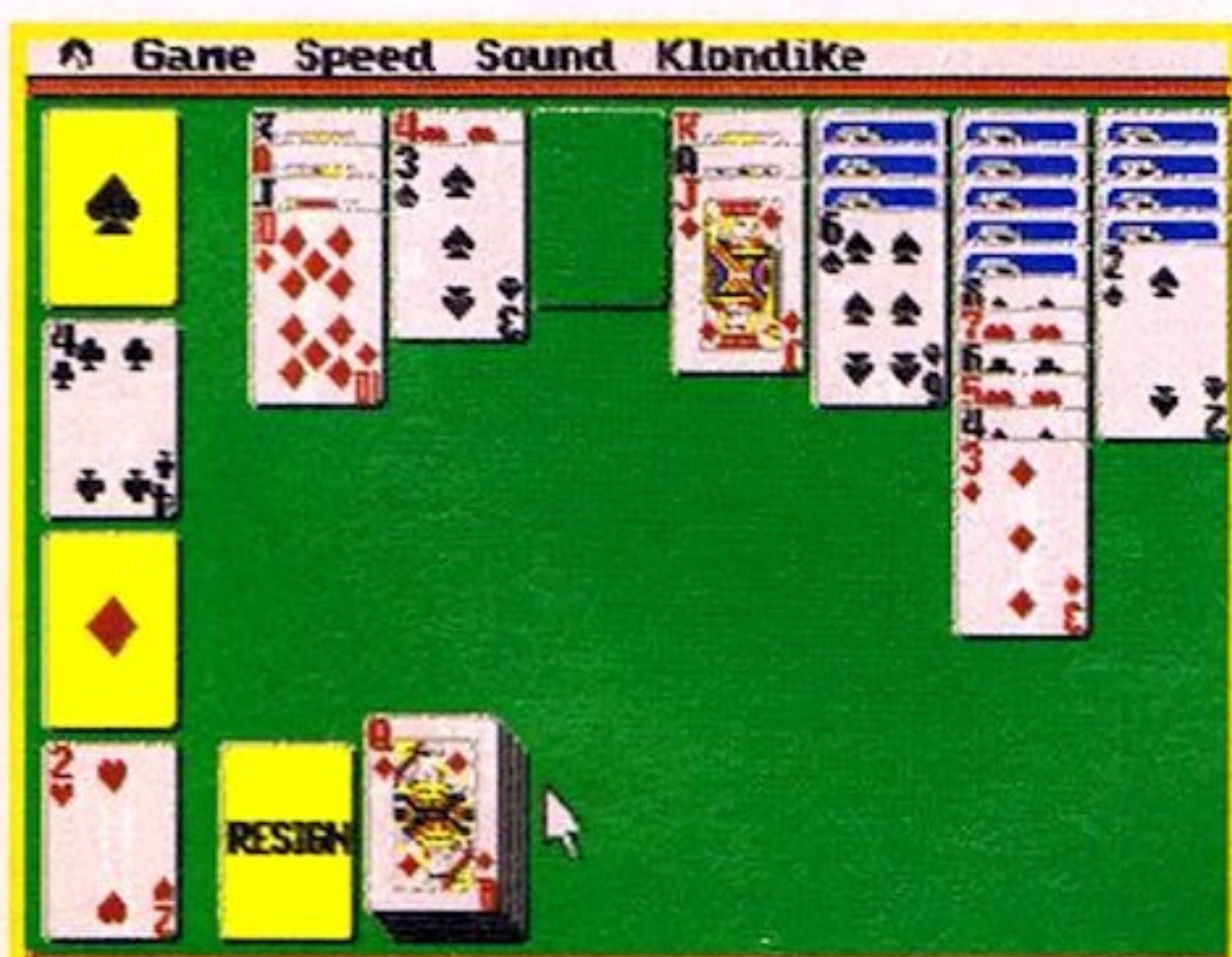
Highs

- Er... it's cheap.

Lows

- Dull games, dull graphics. It should have been laid to rest years ago.

27



CRUISE FOR A CORPSE

It might sound like the name of the fanatical Nicole Kidman fan club, but it's actually a Poirot-like mystery. James Leach pronounces it "Ver-ry inter-resting"

The ship had only been out of port for a short while when the murder took place. You know what it's like. Run out of port and people sober up and get nasty. Luckily, the fortunate discovery of some cans of Cydrax prevented mass genocide.

But we must not joke of such things. An extremely unpleasant act has taken place. As grim a tableau as ever one could wish. A dreadful, horrific crime of almost Poe-like proportions. Someone's croaked someone else. And you, as the callow sleuth, must point your pixellated finger at the evil villain.

Could it be Hector, the mild-mannered SS officer? Or Tom and Rebecca? They look so much in love that you might forget they were both last seen leaving Jonestown in a hurry. What about Suzanne? Surely she doesn't wear that ban-

■ Clothes, bottles of starch and little piles of non-biological powder. It's a den of vice (or a laundry).

dolier packed with 7.62mm steel-jacketed ammunition just for sartorial effect? Well you certainly won't find out by reading this review, that's for sure. You should suspect everybody and suspect nobody.

What about the game?

Cruise for a Corpse is a point and click affair, utilising the Cinemateque system. This means that if you're observant you can select even the smallest details with the mouse and interact with them; reading notes, sniffing empty Cydrax cans knowingly, even checking DNA scrapings that are left on the stairwells.

The advantage of the system is that you are free to wander the



length and breadth of the ship, searching for people to make polite conversation with, discovering clues and stealing expensive-but-small items of jewellery.

The wealth of detail in each screen means that it takes a while simply to play the game, even if

"Dawdle and delay no longer and sprint bravely to the nearest software vendor"

you're being efficient with the mouse. There are five disks, and as you explore, you swap them constantly. Yes, in time (lots of time) you learn to hate the disk accessing icon as it sits rather smugly at the side of the screen, loading in the graphical data for the next portion of investigating.

But if you're interested enough to embark upon a game which, by its very nature, is deep and abiding, you are certainly not going to be put off by a spot of floppy mungeing. In fact, you might welcome it as a chess-player welcomes a couple of hours of deliberation time (what a farrago that Nigel Short thing was, eh?).

And *Cruise for a Corpse* is a game in which time ceases to matter. Once you start, and you get a grip on the problem of who killed



■ I was sad to be leaving Goat Atoll. I'd had good times alone there. Talking to myself, eating insects and getting sunburnt. And no mental health problems. Burble. Beeeep!

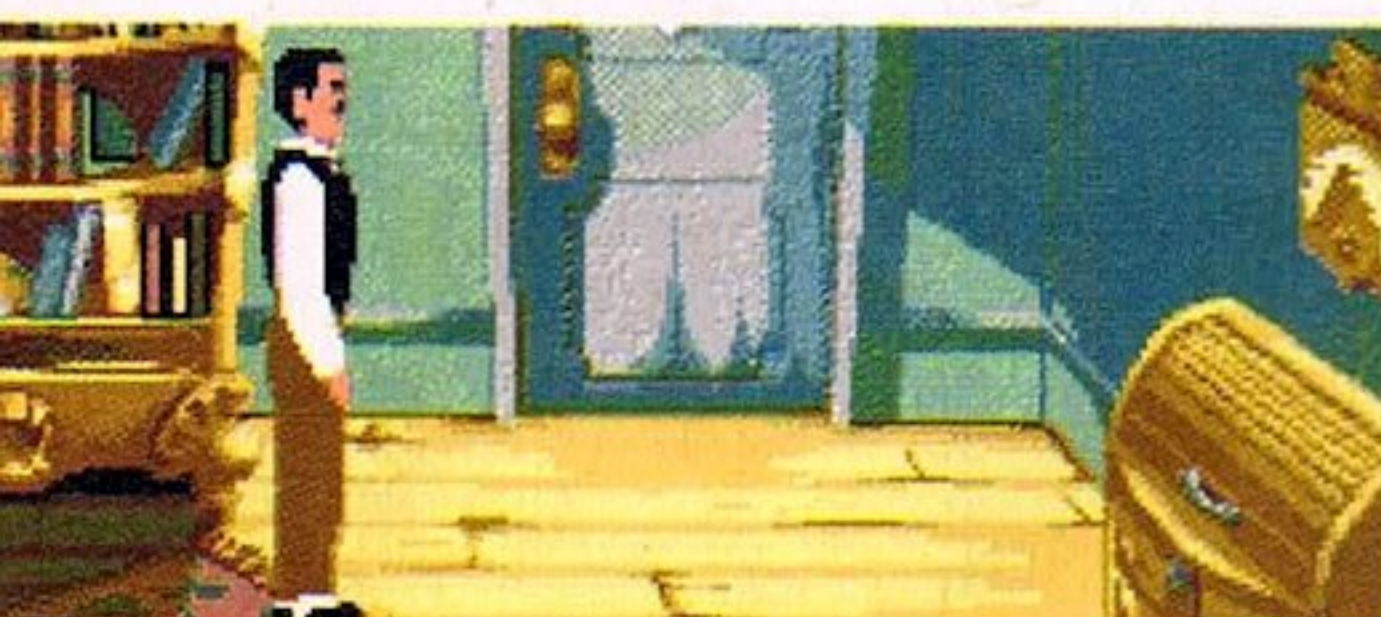
whom, you probably resign yourself to being the sad, hunched figure, clicking the mouse buttons with fingers freezing in the pre-dawn chill, as the sun struggles above the icy horizon. And it's nearly time to go to school or work.

Verdict

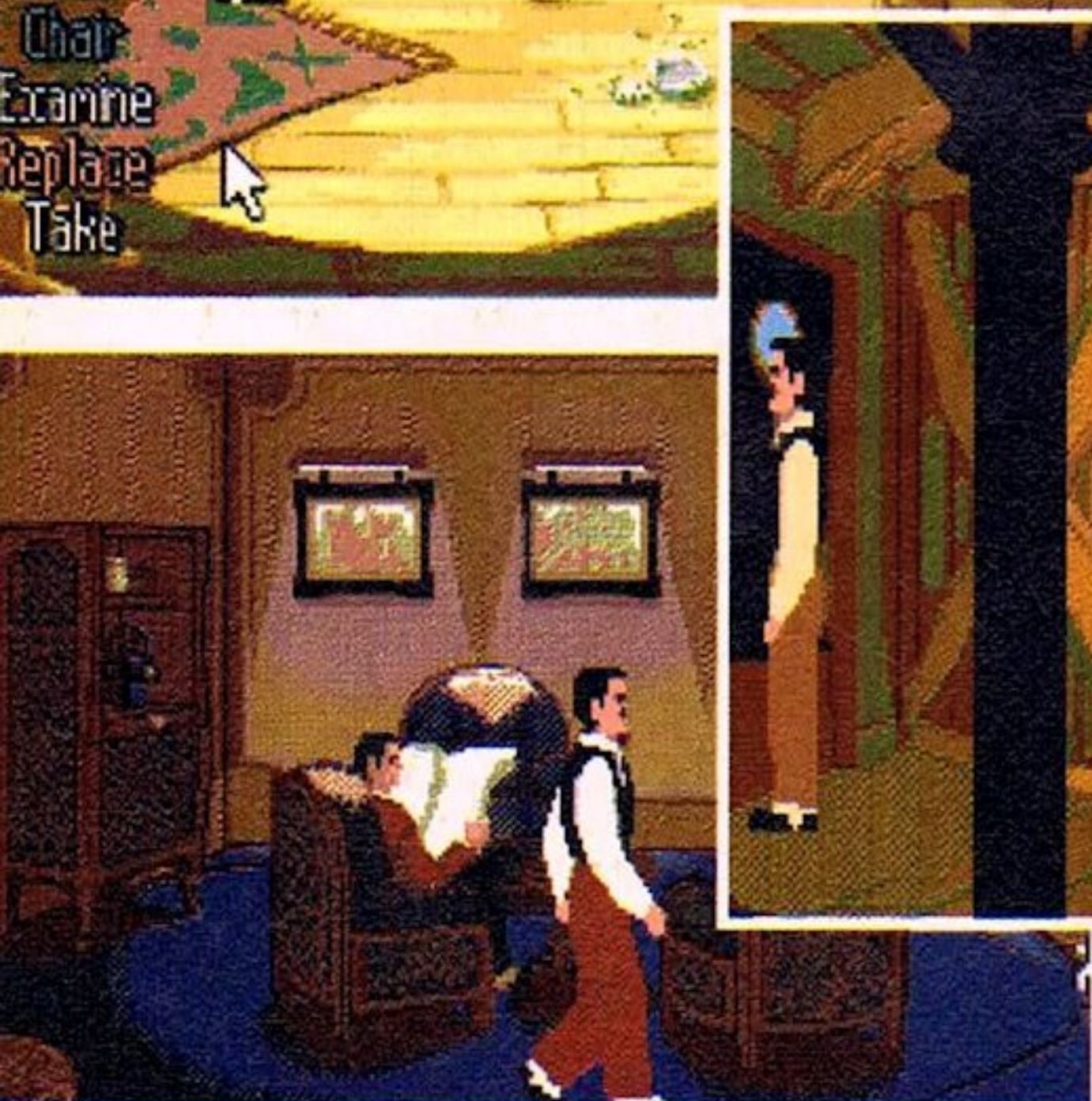
The game looks so good and plays so well that as a budget job it's well worth getting. It takes a while to finish, during which time you can enjoy the slightly surreal French view of life aboard ship.

The graphics are superb, the puzzles tricky enough and the touches of humour just the right side of smirksome. Unless you're monumentally bewildered, you won't mistake *Cruise for a Corpse* as anything other than a giant murder-mystery adventure, and if you decide that's what you're after, then dally, dawdle and delay no longer and sprint bravely to the nearest software vendor.

And if you're not sure whether you are going to like it, then get it anyway. It's a lot of fun, by golly. **stf**



■ Left: When is a door not a door? When it's ajar. Sorry. We shall never, ever use that joke in STF again. Ever.



■ Hmm. The reading room. That's strange. The ship doesn't make a stop at Reading. (Once again, sorry).



■ Yes, the entire superstructure of the ship appears to have been fashioned from various hardwoods. Notably the oak, elm and yew. There is a limit to how detailed you want to get in *Cruise for a Corpse*.

Cruise for a Corpse

£12.99
US Gold
021 625 3388

Highs

- It's big and very lovely to look at.
- It's also fun to play for great long stretches of time.

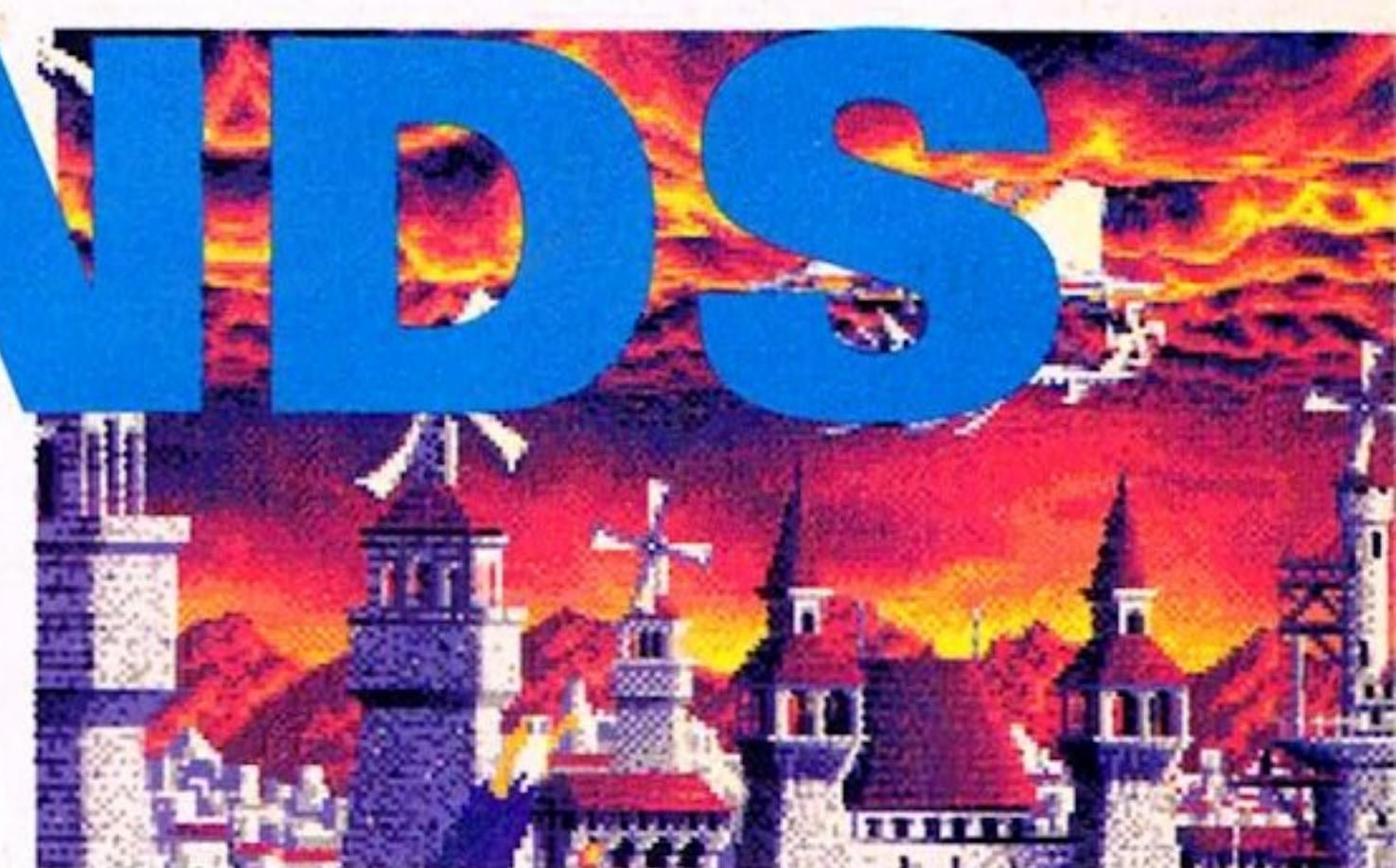
Lows

- Did I say "great long stretches of time?" Well, the five disks need their exercise, and things don't happen fast on board a ship...



DREAMLANDS

Silmarils have put three of their top mouse-driven strategy games in one box. How long can David Robinson adventure for?



■ A band of high pressure brings unsettled weather, strong winds, and the odd flying ship or two.

ISHAR, LEGEND OF THE FORTRESS

Ooh, those loathsome orcs. There you are, looking for the inn so you can recruit some daring adventurers, when one of the creatures sneaks up and attacks your best swordsman. You have to watch out for that kind of thing in *Ishar*.

It's a real time RPG set in the usual fantasy world of magic, questing and people who aren't into settling things over a coffee. You play the handsome Aramir, who journeys through the land of Kendoria killing anything a tad nasty, until ultimately he faces the

mighty Krogh. On the way you pick up companions, each with their own characteristics, who help or hinder your progress.

The only fault with *Ishar* is the speed. Each move through the outstanding graphic landscape – just look at that forest shot – takes a second or so; moving between the different regions of Kendoria takes considerably longer. But get used to this minor irritation, and you have weeks of exciting play ahead. OK, so the plot is nothing special, but you have too much fun hacking the baddies, interacting with your

fellows and finding your way out of the forest to worry about little things like the storyline.

Ishar was a treat when it was a full price game. Now as part of this compilation, it's a must buy for elves 'n' elixir fans.



■ "You are all free-thinking, independent characters. You do not automatically attack people in the woods." "Er, I do!"

■ "Yes, I'd like to buy the dagger please, as today we're going to kill a lot of your fellows."



STORM MASTER

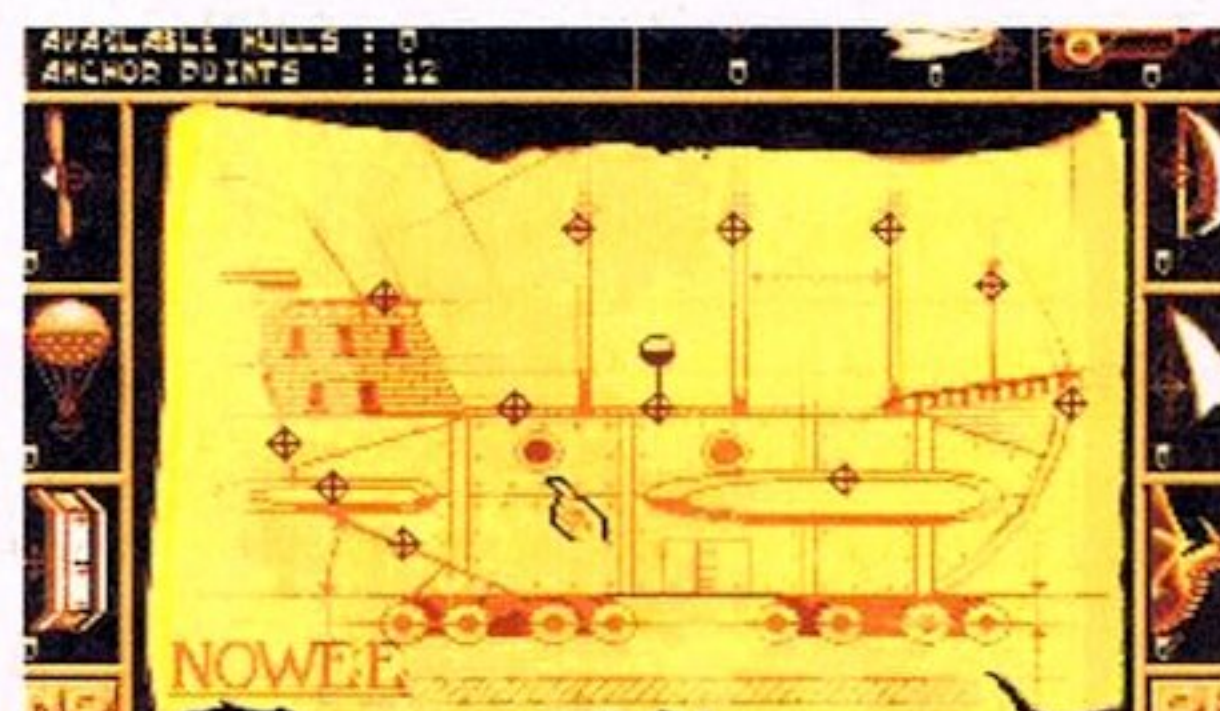


■ "I'll take the strange looking creature with the ludicrous name, please."

all in a month's work in *Storm Master*, the role-playing-cum-god game.

As acting ruler of Eolia, you have to defend your somewhat dark and windy, realm against the neighbouring menace. Consult your knowledgeable Council of the Seven, and if they aren't too busy being murdered, they can help you feed your starving people, or whip up the odd storm to frighten the

Ooh, those Sharkaanians. There you are, busily checking up on your reserves of Eolian sqiiz honey, when one of them sneaks into the Council chamber and murders your chief advisor. It's



■ The British Airways dirty tricks campaign allegedly involved leaving spurious blueprints of aircraft design around Heathrow.

foe. The Leonardo, one of the Seven, builds you bizarre flying machines in the style of his 16th Century namesake, and if they make it past the test flight (a har-

rowing experience, certainly), then you can launch them on Sharkaania. Knock out the seven enemy cities, using a primitive but nifty arcade-style sub-game if you wish, and get back just in time for lashings of that tasty sqiiz secretion (er, they are bees, you see).

Storm Master is an engrossing game offering good gaming if you're into strategy. It's a smart variation on the god game, with plenty for you to think about, stylish and atmospheric graphics and some convincing sampled sound effects. If you tire of *Ishar*, this one is likely to keep you occupied for month or so.

TRANSARCTICA

Ooh, that Viking Union. There you are, busily stoking your boiler with lignite, when... yeah, you get the idea. *Transarctica*

doesn't quite cut it like the other two games. Maybe Silmarils realise this – it's ended up in this compilation ten months after its initial release.

The basic concept – travel round a frozen world, building up your train until you're capable of destroying the evil ruling Union – is novel (and somewhat ridiculous), but the idea comes unstuck with the tedious gameplay. Driving your loco – shunting it

■ Shovel or spade? Take your pick! (Sorry.)

backwards and forwards to negotiate the tracks, constantly changing map views, going back to the engine room once again to put on more coal – drives you, well, loco.

You can travel around for a long time before anything interesting happens at all. If you do arrive at, say, a broken bridge or a city, you are met by a stunning tableau (by now you realise that none of these games in any way can be faulted on their graphics) but nothing more. It's all a bit static really.

Stick with *Transarctica* and you may get a lot of fun out of it. You are likely to spend a lot more time in Eolia and Kendoria though, we suspect. **stf**



Dreamlands

£29.99 Silmarils
071 328 2762

Highs

- Almost worth buying for *Ishar* alone.
- *Storm Master* is an intriguing god game too.

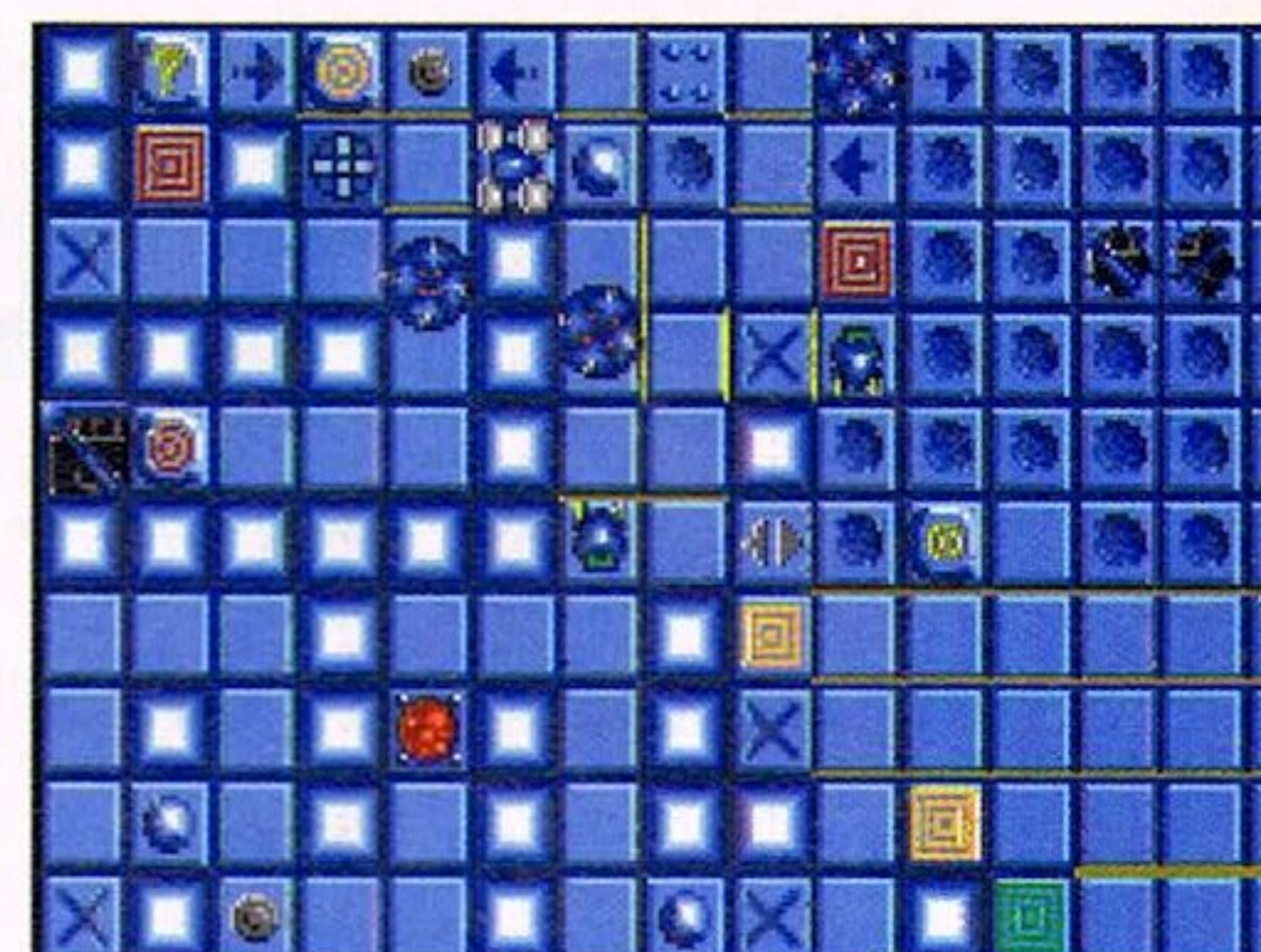
Lows

- The one with the buffers is the duffer.
- Give *Transarctica* time, and you may get to like it.



GAMEBUSTERS

Ah, cheats, maps, tips and hints. You get all that sort of thing in – some other bloody magazine! Ha, ha – just our little “joke.” Of course we’ve got tips for you, some of the finest tips to grace the pages of a quality magazine. Andy Nuttall sits and types forever... it seems



■ Prensorium's a great game - and you can only find it on ST FORMAT's Cover Disk 51. So order it now!

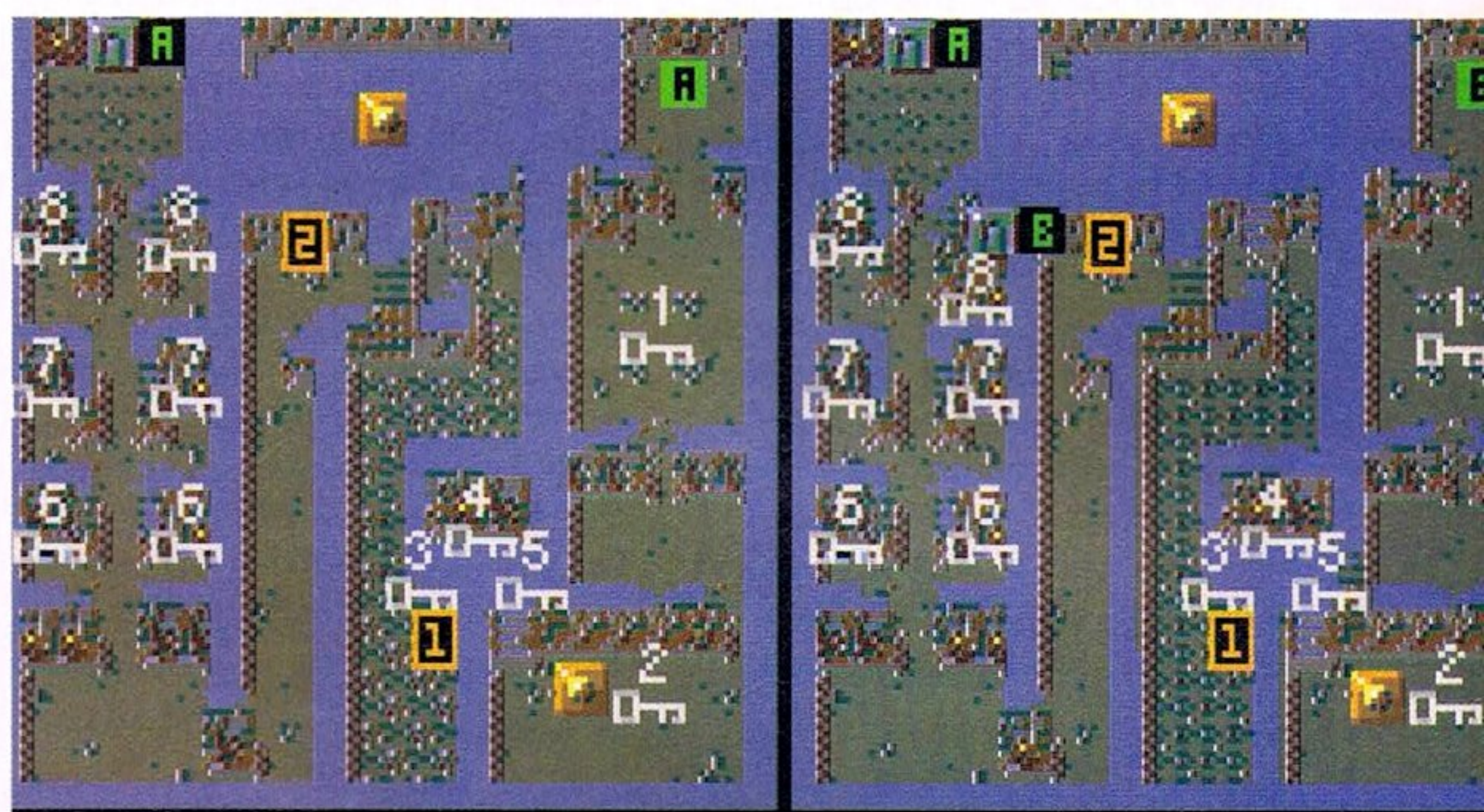
THE CHAOS ENGINE RENEGADE

*Reviewed STF 48, 94%
Let's see, this is part one... two... ah, here we have part three of this most excellent guide to The Chaos Engine. The following prose comes straight from the horse's mouth (or at least from the Bitmaps, which is much the same), and you can catch the final part next month*

World 3 Level 1 - The Pits

Select Silver Keys 2 to create a bridge. Cross the bridge quickly – it gives access to the secret area at point 2. If it disappears, collect Silver Keys 1 to create a permanent bridge. Every StoneWatcher you shoot on the wall at point 3 earns you a coin. Shoot the statue at point 4 and get lots of treasure – but you must kill a few spiders first.

Shoot the statue at point 5. The routes from both areas converge in the room near point 6. Collect the Players Saved token at the top of the stairs to remove the wall at point 6. Clear your path at point 7 by shooting the node in the room to the east, and you get



■ World Three, Level Three. “Hi, Captain Caption here. Hmm, The Chaos Engine, eh? Sounds a bit like “internal combustion engine,” doesn't it? The combustion engine was invented by Mr P Entwistle of Stourbridge, England.

through to the maze of pits at the end of the level. To get to the centre, solve the puzzle in the eastern area. Collect Gold Keys 1 and 2, enabling you to reach point 8. Set 2 must be approached from the south. Pick up treasure on the small island and you are teleported to point 9 in the centre of the pits. Different routes through the pits

lead you to either Gold Keys 3 or 4. Each set leads to a different route.

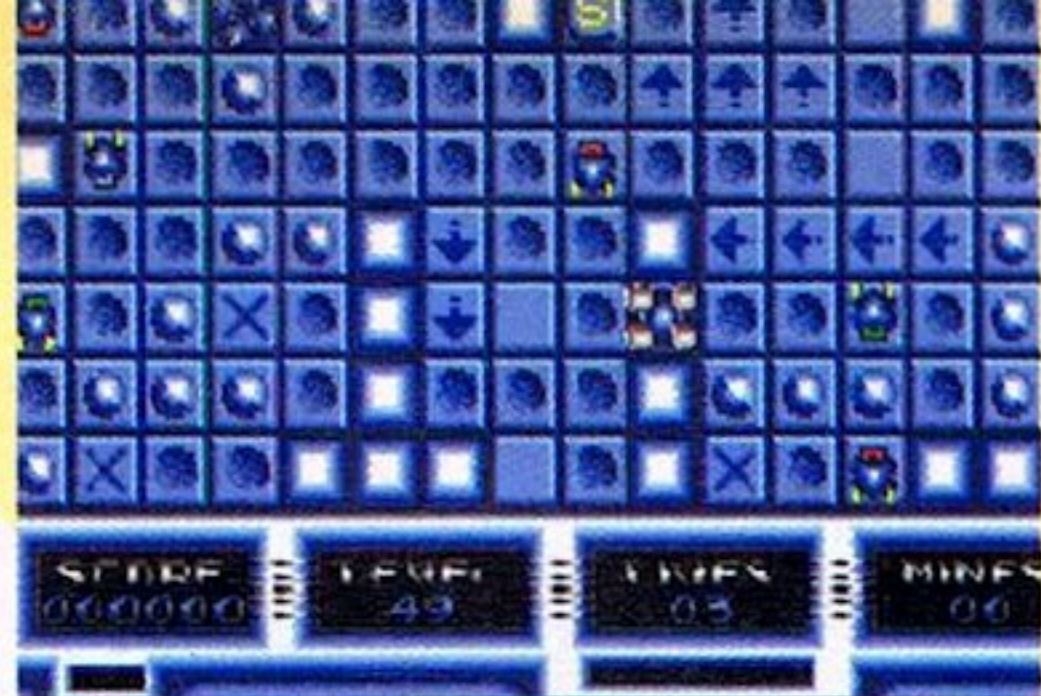
World 3 Level 2 - Confusion

Choose one of the four corridors. If you take corridors 2 and 4, Silver Keys 1 appear near the start point. As you collect these a small section of floor rises up. Walk on this to be teleported on to the main route into the level. In the next room, the statue at point 5 flashes. Walk into the wall behind the statue and you are teleported back to the start point again. The wall next to Silver Keys 1 now opens, giving you access to the secret area leading to exit B. Collect Gold Keys 1 and 2. There's a clue for the puzzle floor within the next room. Follow the sequence of shapes on the floor: circle, square, plain. If you get it wrong you are teleported back to the start. The more mistakes, the less treasure you find at the end.

After you have shot the node in the next room, three steps appear, each leading to different



■ World Three, Level Two. Other interesting inventions: A combined coathanger and cigarette lighter, for stressful times hanging your clothes...



PRENTORIUM

The amazing puzzler from Martin Gibbins has had loads of you tearing your hair out over the last few weeks. Now L Wardle (no christian name again) has battled through all 50 levels just to help you out. Isn't that nice?

Level Code

1	LEV001
2	BRICKS

3	FLIGHT
4	CIRRUS
5	COLOUR
6	bonus
7	ARNOLD
8	EUGENE
9	MOTHER
10	URANUS
11	ADYROM
12	bonus
13	SORROW
14	CRYING
15	DOGS77
16	WISH75
17	KAOSFM
18	bonus

19	POTWP1
20	SHEEP4
21	HOBBIT
22	03PIGS
23	LLAMAS
24	bonus
25	CB500T
26	RELICS
27	POTWP2
28	WYWH75
29	NEDIAM
30	bonus
31	SXP420
32	933157
33	PATGOD
34	842261

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keys. Silver Keys 4 give you the most treasure. If you don't get into this area you must follow the main route through the level from the start point towards A. If you pass via the western room to the north of the start, only the node in that room exists and only Silver Keys 6 are in the north room. If you enter the eastern room only the node in that room exists and only Silver Keys 5 are available. Silver Keys 5 open the east door, Silver Keys 6 open the west door.

Go west and you collect Silver Keys 7 to open the exit. The island to the south of point 7 has treasure on it. Follow the lines on the floor; shoot the statue at point 6 then collect Silver Keys 8. Collect Gold Keys 3 to open the door at point 8. Collect the telephone at point 9, and you are trapped. Shoot the Lobber across the chasm to open the door to the north, so you can proceed towards exit A.

World 3 Level 3 - Reverse

A plays the western side of the map. Shoot the plinths surrounding Silver Keys 1 to get to them. Activate the node at the bottom of this section, collect Silver Keys 2. Silver Keys 3 and 5 create Silver Keys 4, which complete the western steps. Silver Keys 5 teleport you to the same place on the opposite side of the map. If this happens, go up the middle channel of the section until you reach point 2, which teleports you back to your original position.

Collect Silver Keys 6, 7 and 8, then go through the door at the end of the corridor. B plays the eastern side of the map. Silver Keys 1 trap you inside an invisible force field. Shoot the Missing Link to get free. Collect Silver Keys 2 at the bottom. The node which appears creates the steps to the west. Collect Silver Keys 4, then Silver Keys 5 and 3, then the other set of keys which appears. At the set of steps you are teleported to the same



■ World Three Level Four. Head-light slippers in the dark. But how do you find the slippers to put them on? Then there's the combined garden gnome/burglar alarm...

place on the opposite side of the map. From here throw a special weapon on to the node on floor level just to the south and east of you. Now activate all the nodes on the level and open exit B.

Continue up the middle channel to point 2 which teleports you back to your original position in the eastern half. Collect Silver Keys 6, 7 and 8. Silver Keys 8 open the door at the end of the corridor which enables you to get to exit A. To exit point B, collect the right hand one of the pair of Silver Keys 6 and the left hand of Silver Keys 7. This exit only opens if you have activated all of the nodes within the level.



■ World Three, Level One. ...A plastic thing to stop your shoes wearing out while driving, an auto pet feeder, the abominiser (sic) and the closet maximiser. Chaotic tat - where would we be without it?

World 3 Level 4 - Way Out

If you begin at start B you must first collect Silver Keys 2, then 3. An exit appears which teleports you to start A. Shoot the statue at point 1, then collect Gold Keys 1. These open the door to the small room at point 4. Collect the treasure. Walk on the mound at point 2, and the steps at point 5 appears. Enter the area beneath to collect the treasure. The telephone at point 3 switches around the steps to the north. Collect Silver Keys 1 to get out of this bonus section. If the steps at point 5 are not there, the set to their east is, so go down those. The door into the small room with Gold Keys 2 can be shot. Collect these to get to the ledge at point 6.

The rooms to the north of point 7 contain monsters. Shoot them; then if you can collect the

keys, the door to the room directly to the south is open. Collect the treasure it contains. The Silver Keys in these rooms keep the doors open. The alcove at point 8 has a misplaced shadow. If you walk into the wall at this point you are teleported into the secret area in the south-eastern corner of the map. From here you must get to point 9.

Entering the circle on the floor teleports you back to point 8. The central pillar below this point doesn't have a StoneWatcher on it. Shoot this pillar on the top to reveal Gold Keys 3. These open the door to the room at point 10, which contains some treasure.

ISHAR 2: SILMARILS/DAZE

**MESSENGERS OF DOOM –
REVIEWED STF 49, 92%**

This game's so vast, even top comedienne Jo Brand pales into insignificance beside it. It may please you to know that this isn't a guide to exploring Ms Brand...

Part One Irvan's Island

Go west (We Close Our Eyes, etc) then north, and avoid the fight. Enter the village, and play with the pump handle. Recruit Kudsac, pick up his possessions, then kill him. Visit the two inns to recruit four characters (preferably Eliandr, a scholar; Zoloran, a magician; Fandhir, an archer; and any warrior.)

Buy a sword, a bow and some arrows from the armourer, and some food from the shopkeeper so

you can recover your physical strength after fights.

Go to the harbour (S-SW), and force a passage: take prisoner and hand over to the village chief who then tells you what your mission is. Return to the starting point: south then east. Kill the three thieves, find the

■ This poor girl looks as though she's been dragged through a hedge backwards. Oh, she has? What's that? She's a he? Well, you can never tell these days, can you. Gibber.

dead woman, and pick up the pendant. If your strength is a bit low, eat some food, then return to the village to recruit and to buy helmets and shields.

Go as far east into the forest as you can, then go north to pick up the black and white mushrooms. Go to the extreme north, pick up

■ In Ishar 2 there are plenty of interesting people to meet. Take Alan the Armourer. He'll do anything for a fiver, as long as it involves sharpening things.

■ This, er, happening place is where you go when you die. Honest.



the dandelions, then fight the wasps. Enter the forest clearing on the south side, and kill the Orcs. For the chief Orc, you need to use as many arrows as possible. Pick up the necklace.

Return to the village, hand the necklace to the chief, then recover the boat. Eat, sleep, then buy arrows, arms and food. Go to the harbour, select the town landing-stage.

Zach's Island

Go right through the town to the library at the extreme northeast. Pick up the fortress parchment, and

kill as many enemies as possible (to gain money and experience.) Buy arms, helmets and food, then recruit if necessary. Eat and sleep to recover strength. Return to the harbour towards the fortress.

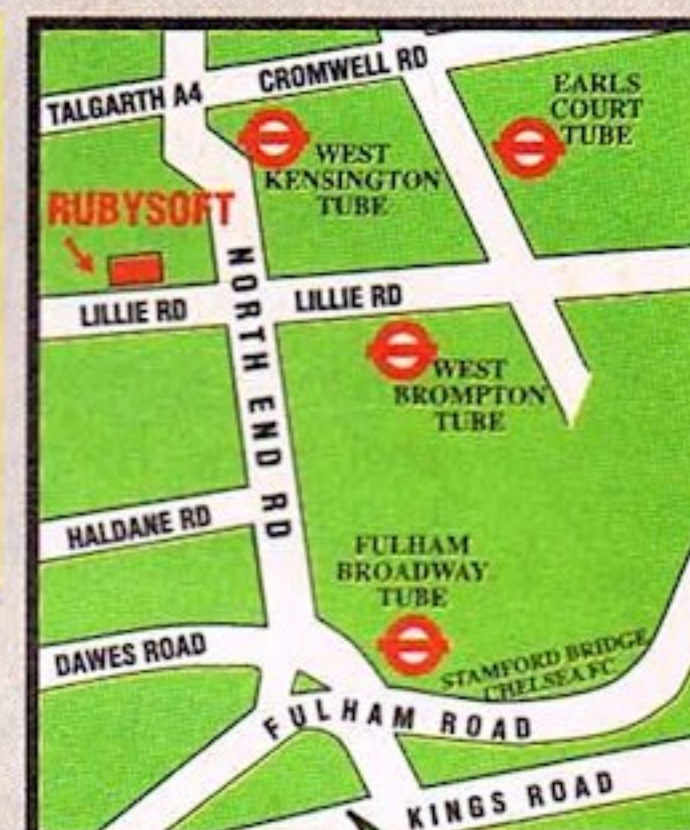
Akeer's Island

Follow the wall on the right, trying to keep moving east all the time. Fight with the skeletons, then go through the south passage. Pick up the treasure in the cul-de-sac at the south end, and the skull in the cul-de-sac to the east. Leave the passage, continue east, then go south. In the large room, go to the

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THE PATRICIAN

A player's guide, from the Ascon GmbH (the game's makers), to getting rich, winning friends and influencing people...

The key to success in *The Patrician* is realising that although money is all-important, it's really no substitute for power. These tips help you acquire both.

Begin the game by basing yourself in Luebeck, and having borrowed an appropriate amount of money, start trading between Luebeck and Malmoe, taking wine or salt from the first, wood and wool from the second. At the beginning of the game you should try and concentrate on shifting all the cheap goods such as salt and corn – low prices means low risk and high quantities.

Look out for the arrival of the spice fleet. If you choose Quick Start the spice fleet have already docked in Brugges when you begin the game. When the fleet docks, sail straight there and buy as much pepper as you can, then stay in the dock for a couple of weeks. You can then sell your stock for twice what you paid for it.

There are other commodities which provide you with an equally fast buck, but you must buy them in the right places. For example, buy furs in Nowgorod and sell

them in London. Buy wines in Brugges, oil in Bergen and hemp in Danzig. Buy salt in Luebeck, and sell it in Stockholm.

There is more to trading than making a fast Thaler. You must also impress the townsfolk with your activities. If you only deal in essential goods like meat and fish, you won't get yourself noticed (or remembered.) A little flair may be called for, along with some trading in luxury goods.

Once you have enough money, a wise way to spend it is on more ships. The

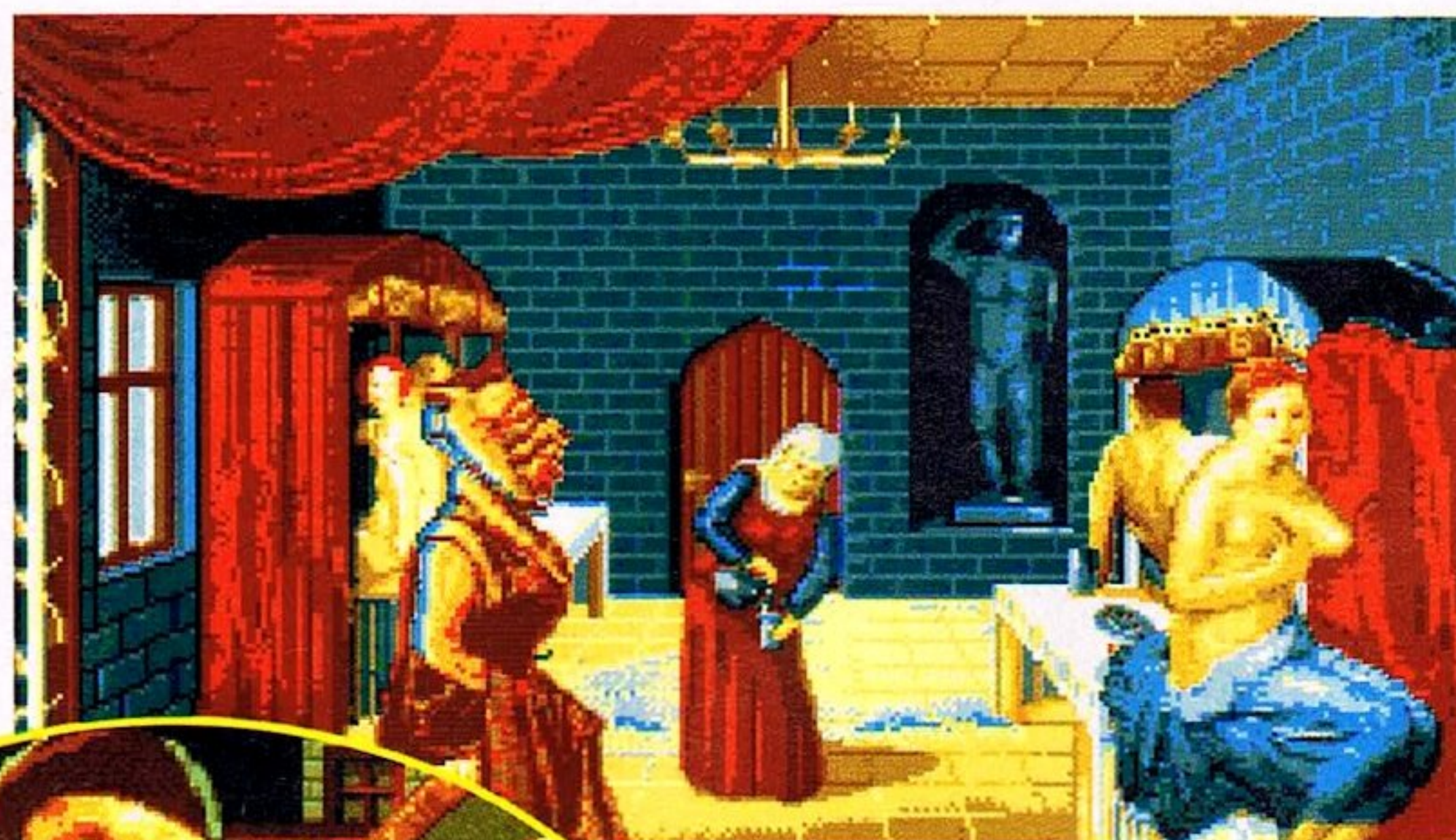
■ "No, don't listen to him." The weird-looking one (in the mirror) is about to be conned into not marrying the girl of his dreams. Just so that the bowl-head can get his leg over.

cheapest and quickest shipyard to use is in Nowgorod. All you need to do is load up with hemp, because all the other materials you need should be in the town.

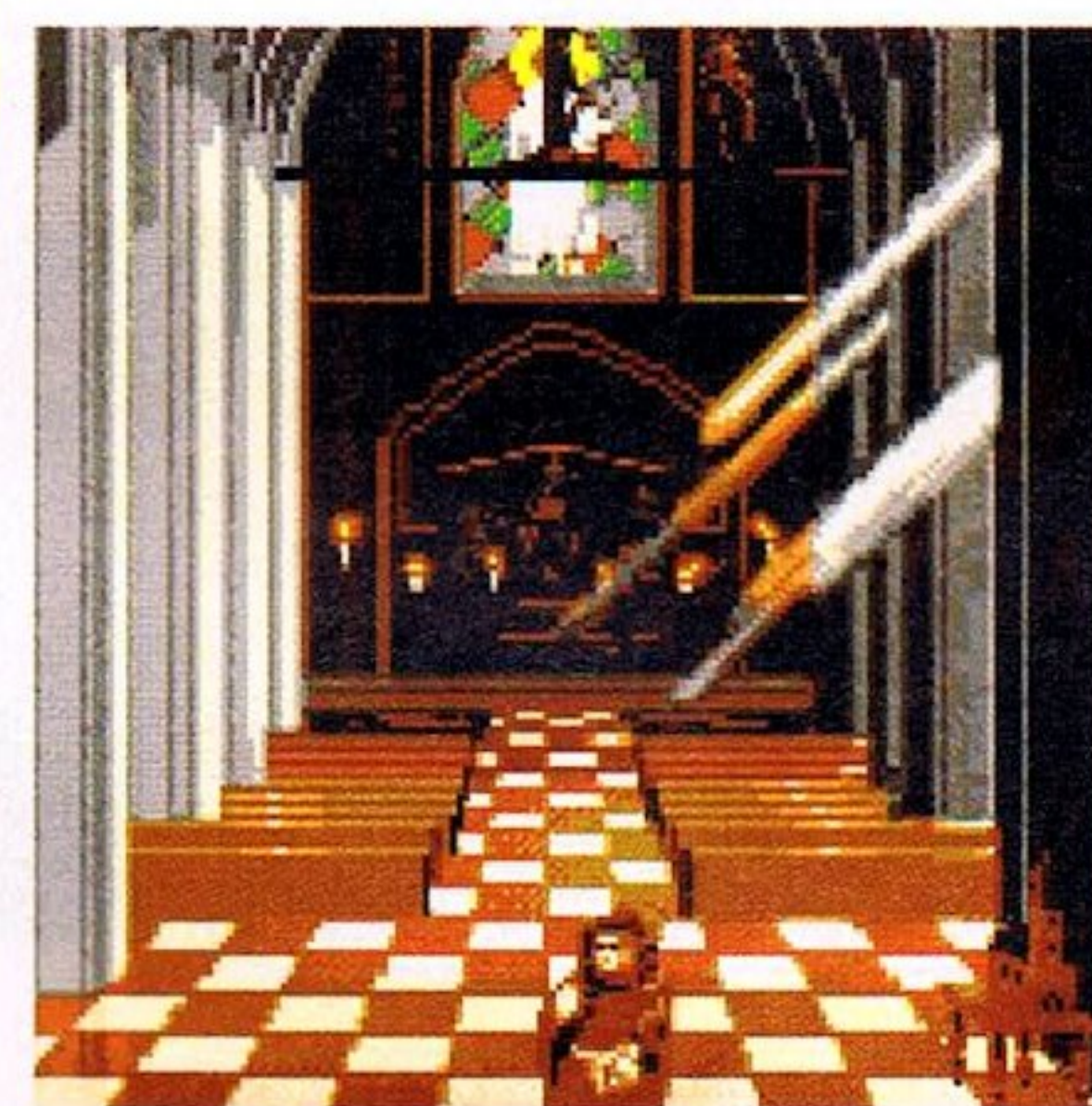
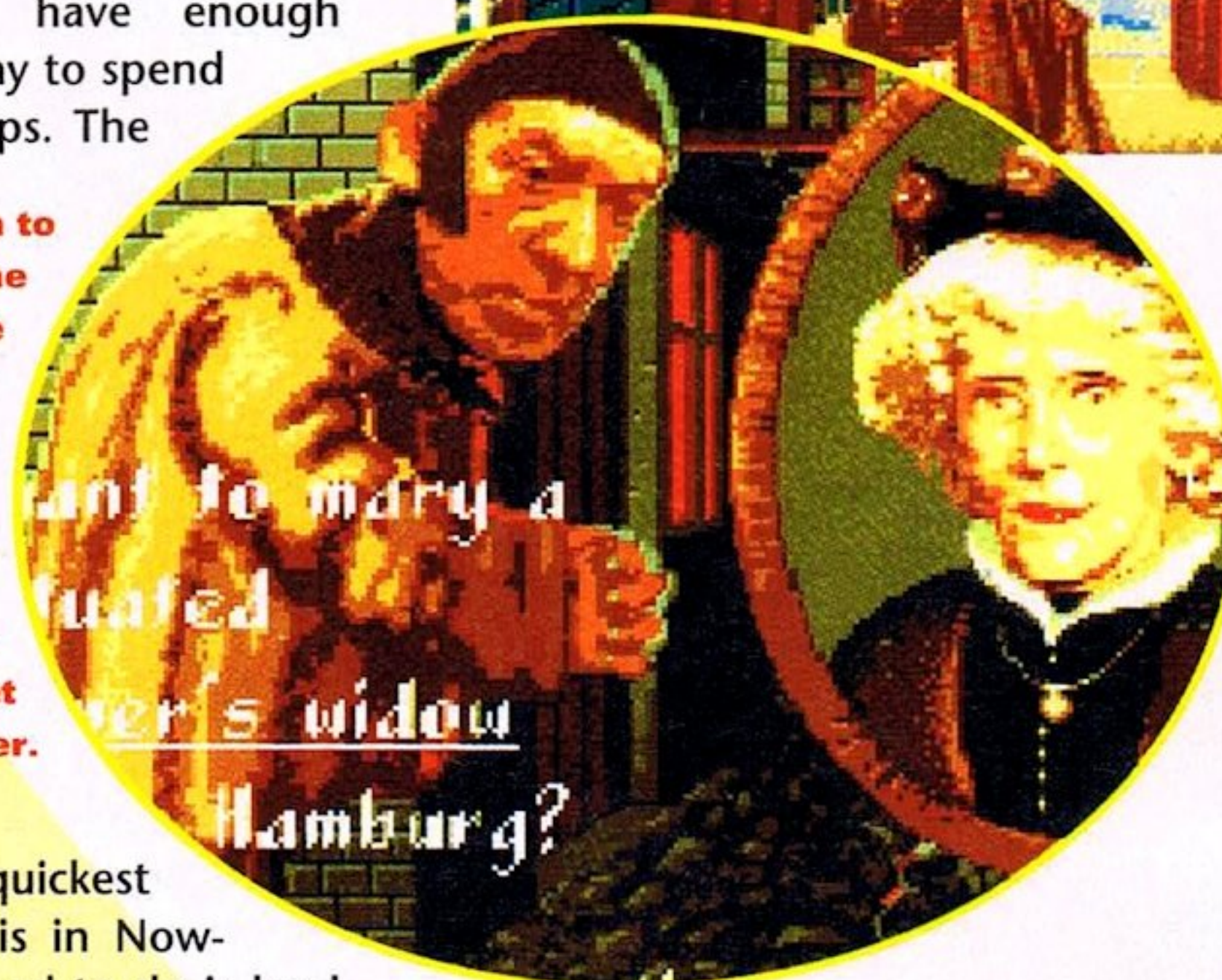
Dealing with pirates

This is a pretty risky business, but if you're willing to run the risk you could end up with an entire fleet of ships for next to nothing. Hand over a fully-armed ship and crew – as far from your home town as possible – and the pirate sells you every ship he captures for a pittance. On the other hand, he might disappear and never be seen again. Alternatively, set up a guard ship in front of the town, which the pirates are heading for, and attack them as they enter the port. If you win you not only get the ship, but also the gratitude and the admiration of all the townsfolk – an invaluable commodity.

■ ...So the only real option is to sail away into the sunset, all dreams of life with your betrothed sunk forever.



■ It's not fair - these dignitaries always get the pretty ones. This one's a tad old, though, so he has to ply her with Babycham first.



■ Even religion doesn't work - when flaming arrows fly down from above.



Always make sure that you have enough money in the office, and that you pay your debts on time. Keep your ships in good condition, because if they deteriorate their capacity reduces. If you have a ship that's a complete wreck, then just sell it straight away. Selling ships at auction is a good way to make money, because you can bump up the price by bidding against yourself! You need to be very quick on the keyboard to do this, but be careful not to bid too high, or you might end up paying for a ship you already own.

Get popular

The easiest way to win popularity is to throw a party. If you're having problems with the catering side of party-throwing, here are some tips:

Build yourself a warehouse, and stash 30 burdens of the following commodities: meat, fish, ale, wine and corn. The best days to throw a feast are between the 24 – 31 December, (surprisingly.) The same catering arrangements apply

■ And then - oh, bad luck. These pirates have no sympathy; not even for one who has lost everything.

to weddings. When you want to get married, the best bride you are offered is the grieving widow of a bargeman – as a dowry you get two large ships.

To become Alderman, you need to be Mayor of your hometown and have an excellent reputation in several other towns. Join as many guilds as you can, and trade between as many towns as you can, and be generous with your wealth. If you want to see results, you should spend around one million Thaler on the town initially, then one and a half million, and about three million the third time.

Use your warehouse. Buy cheap products like cereals, and take on employees – they make valuable processed products such as beer out of it.

There are many unpredictable elements in the game. Disaster or good fortune may strike at any time – but one thing is for sure, the further into the game you get, the more dangerous transporting goods becomes. Equip one of your ships to lead a convoy, and you not only reduce the risk but gain popularity as well. **stf**

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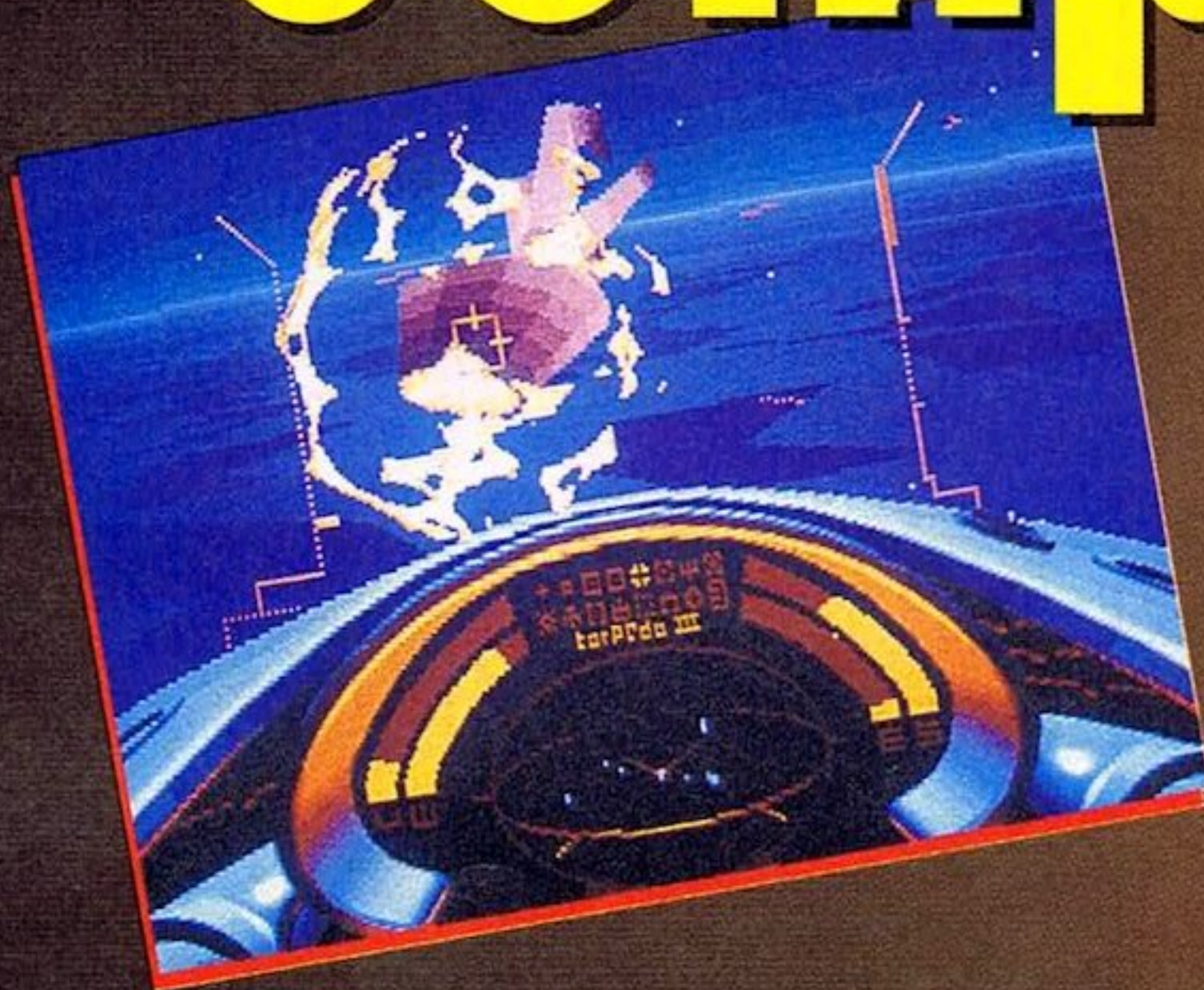
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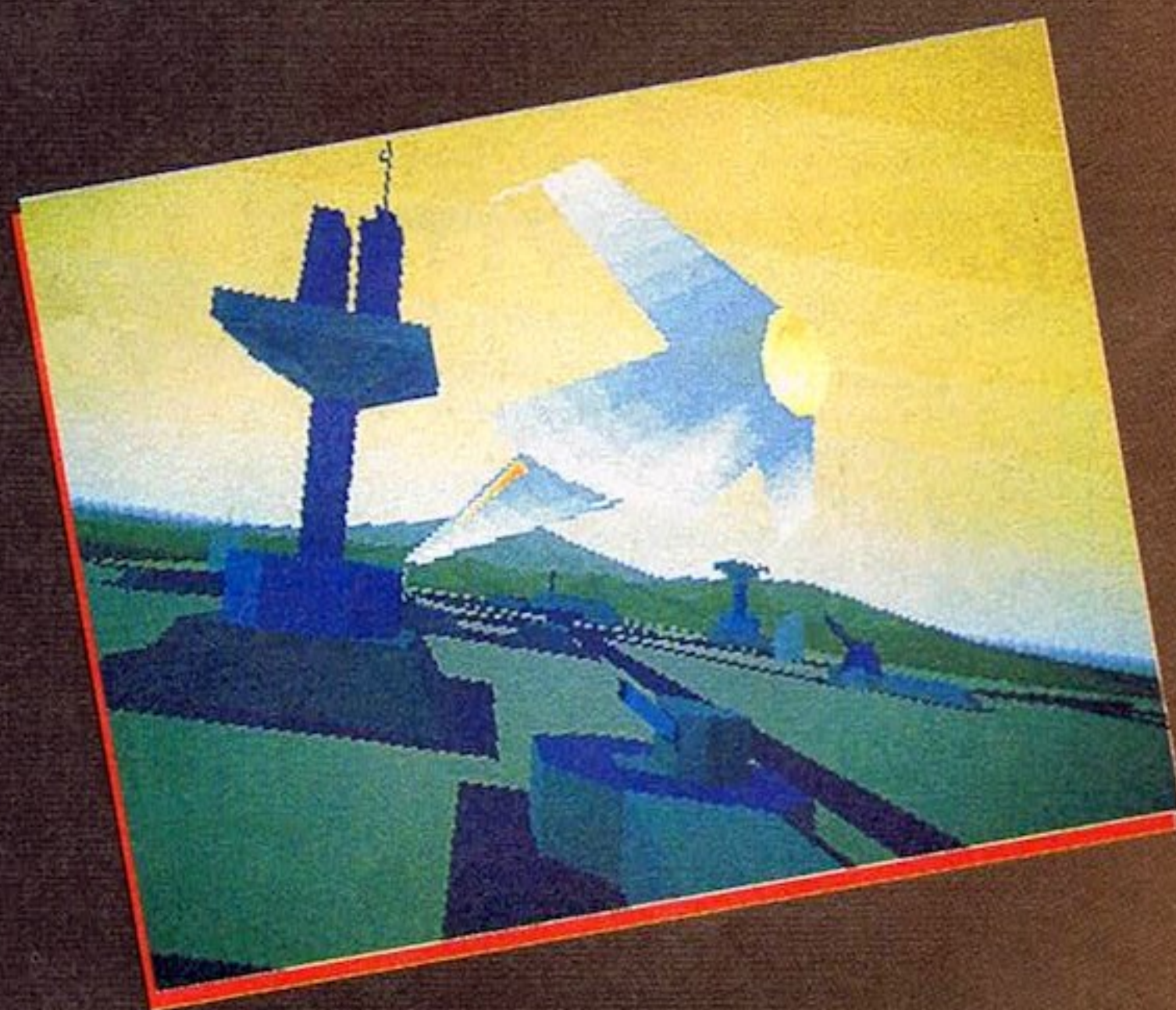
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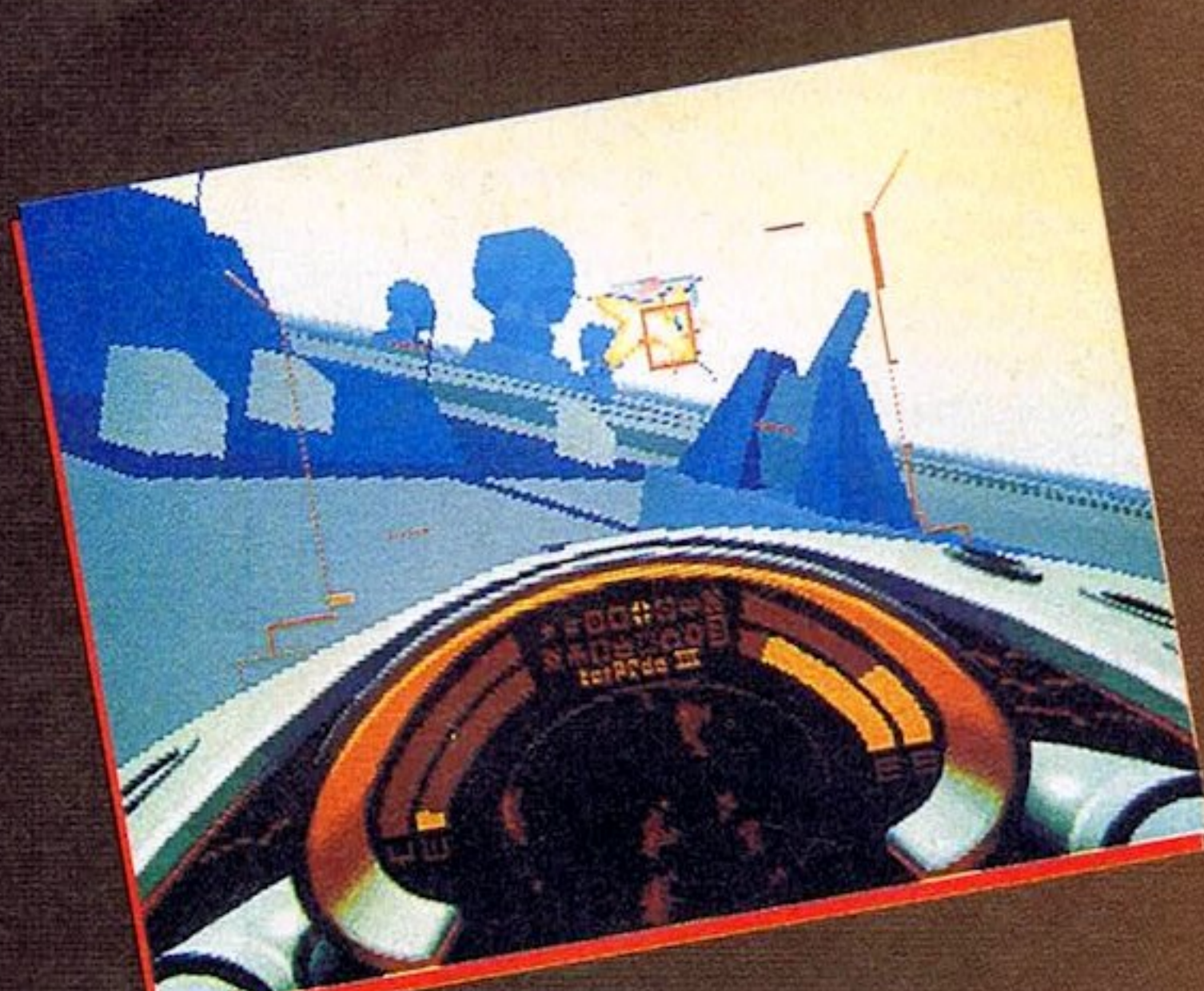
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Monkey revisited



Can you tell me how to get the banana picker from the hut in *Monkey Island* and what I have to do at the monkey head? Please help, I've tried everything thing that I can think of.

Jayne Davis, Manchester



■ Guybrush certainly has designs on power - but perhaps this isn't the best way to go about achieving it...

CB: First make sure you've used the rowboat to get to the beach; got the bananas from the bowl in the left hut; got the skull from the prison hut, and escaped through the floorboards; given the bananas to the monkey near the banana tree, and looked at him until he looks happy; pulled the nose on the left totem pole; picked up the wimpy idol near the monkey head; entered the hut on the left of the village again, then come back out again; given the cannibals the wimpy idol. Now you can enter the left hut again, and pick up the banana picker. Hurrah! Hurrah!

If you give the banana picker to Herman, he gives you a key to the monkey-head. Use the key in the ear of the gigantic monkey-head, and the head opens.

Operation Overrun



I'm stuck in *Operation Stealth*. After taking the taxi downtown, and buying the red carnations, I

can't get to meet the guy in the park. What am I doing wrong?

Itai K Ndoro, Zimbabwe, Africa

CB: This one's fairly simple in theory, but many people find it difficult. When you get the carnation, use it on John. (Seems a bit suspect, if you ask me.) Go to the park, and walk around the bench until your contact appears. He gives you a card and a key, then you need to go right into the bank.

Patience is a virtue



Is there an easy way through the mazes in *Operation Stealth*?

Jethro Day, Leics

CB: Er, no, not really. Just remember to be patient, save your game regularly, and make a map of the locations you've seen.

Er, Breakout again



Has anybody got a cheat for *Arkanoid 2*? I haven't played it for years, and I'm now tearing my hair out with frustration.

Barry Devon, Salisbury

CB: Anybody? Well, we've certainly got one. While the game is loading, hold down <Caps Lock> and type "IMAGINE". During the intro sequence type PETEJOHNSONWANTS-CHEAT, then pressing <S> during the game zaps you to the next level.

The *Cheater's Digest* notes a strange feature in *Arkanoid 2* - apparently there's a strange advert for the hit film *Robocop* in it. Hold down the right mouse button as the game loads and keep tapping the left mouse button. Stop hitting the left button when the game has loaded and *Robocop* should be seen. Bizarre.



■ If you can't get to the later levels in *Chaos Engine*, don't worry - neither can we. But we can with the help of these excellent codes.

It's Chaos!



Have you got any passwords for *Chaos Engine* on the ST?

George Amos, Surrey

CB: Well, we don't want to give too much away, but as we are feeling generous here are some codes for world two level one (one player.)

BRIGAND	
AND THUG	6LVQJ6Q5ZDQ
GENTLEMAN	
AND PREACHER	XJ82ZLR6WBZ8
MERCENARY	
AND PREACHER	84XMXJFHVBOV
THUG	
AND PREACHER	7LBHGV9F#72F

Second Book of Deuterios...



I've had *Deuterios* for about two years now,

but I've never really managed to get anywhere with it. Is it possible for you to give me some guidance - maybe a cheat, or some hints? Or anything else that may help me.

Sally Newman, Wolverhampton



■ The most bizarre wargame ever produced - but then, what do you expect from a company called Sensible Software?

CB: Press

<Caps Lock> and hit <C> twice. Two numbers should appear. Now design something and you should find that the item is instantly available - you don't have to bother building it. You also get infinite supplies of each item.

The *Cheater's Digest* gives a warning that some *Deuterios* data disks have a virus on them. Remember, always switch off your ST for at least 30 seconds after playing the game to prevent it spreading. If you are worried about it, send your game back to Activision for a new copy. Activision can be contacted at...

Activision Europe, BP 40, 92101 Boulogne-Billancourt, France

Megalomaniacs Unite



Help! I'm stuck on Epoch 5 of *Mega-Lo-Mania*. My little men just keep on dying. Somebody please put me out of my misery and give me a cheat for this excellent game.

Robert Swan, Newport

CB: Unfortunately, we haven't got a cheat - but we do have the complete list of level codes. Here you go...

Epoch	Password	Men
1	uwiancyiwmd	100
2	cpkchdqqihj	170
3	boybzghwsht	225
4	fwbdxzcxdxbr	624
5	bypchznyuhn	630
6	pdsdfoiaxhl	620
7	ylhbdnkdbb	600
8	smqctgfdotl	580
9	sudcnqtmamb	380
10	rgfdhvvkygf	420

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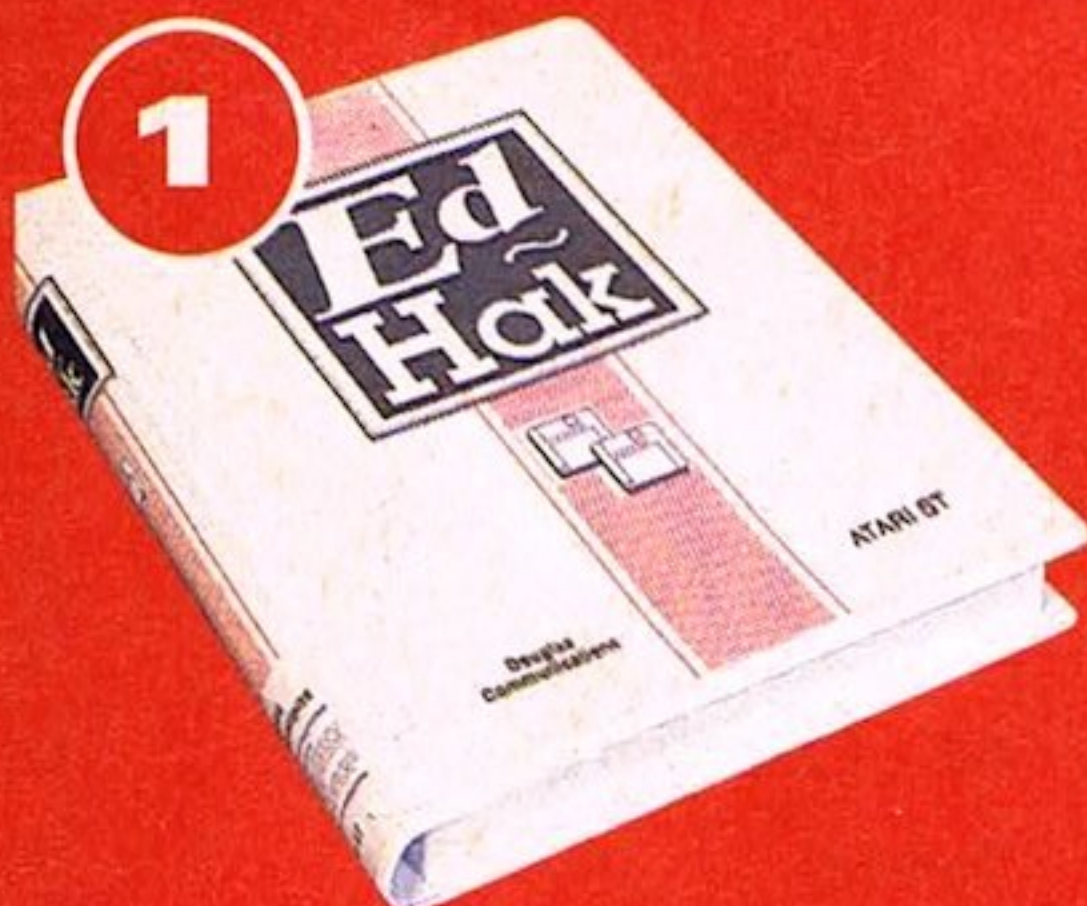
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HERE'S ONE I

Ten tips for building your hard drive

- 1** Don't buy MFM, RLL, EDSI or IDE hard drive mechanisms even if they are "bargains." Host adaptors only work with SCSI drives, all other types of drive are a waste of your time and money.
- 2** Don't buy a hard drive bigger than the case it's going to fit into.
- 3** If you have an STFM make sure you have TOS 1.4. Hard drives have problems with older versions of TOS.
- 4** Always observe static precautions when handling hard drives and other electronic gear, wear an earth strap or ground yourself regularly.
- 5** Keep the name and address of mail order companies in case there is a problem.
- 6** The same goes for private sales, keep the name and address of the person you buy your drive from.
- 7** If you are buying second-hand then "try before you buy" if possible.
- 8** Always make sure you make connections the right way around, never try and force a plug into a socket.
- 9** Always make sure you know exactly what you are doing, if you have any doubts at any stage then read the instructions again.
- 10** Never start any soldering if you are not sure that you can do the job, excessive heat can destroy a hard drive just as effectively as static electricity.

You can build your own hard drive in under an hour using an easy to assemble kit. Clive Parker stands by with his screwdriver poised...

A hard drive is the most useful piece of kit you can add to your ST setup. After using your hard drive for just a few hours, using a floppy disk is agonising. Speed comparisons between floppies and hard drives are futile, it's like comparing the top speeds of a slug and a cheetah! Hard drives have really come down in price, so even if you only have a modest budget you can afford to buy one. An average size hard drive with 52MByte storage capacity can cost as little as £300 complete, if you shop around,

but a cheaper method is to build it yourself. And you never know, you might even enjoy it!

It's not that difficult. All you need is a hard drive kit and a SCSI hard drive mechanism, with these it's now possible to build yourself a 100MByte hard drive for under £300. Hard drive kits cost between £150 and £200, depending on the type of host adaptor, and whether they are supplied with formatting and partitioning software to get your system operational.

Bare SCSI mechanisms are not included as part of the kit, you

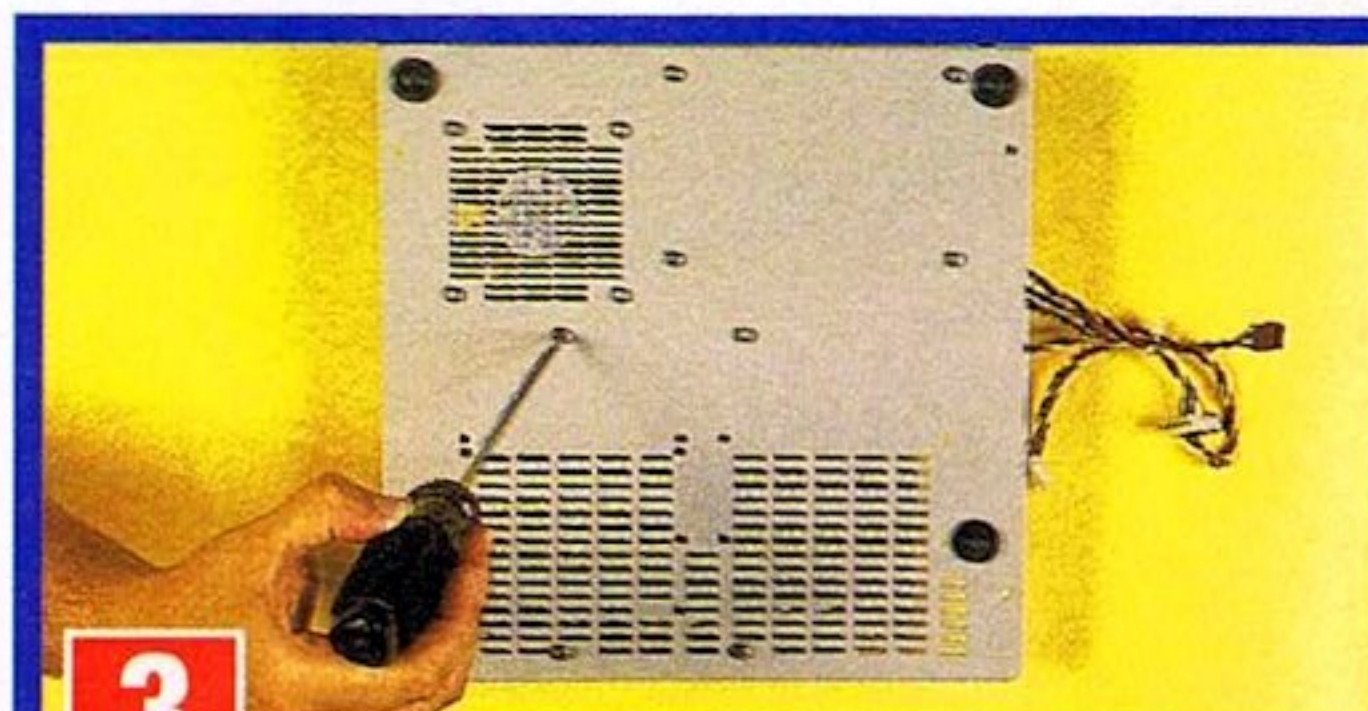
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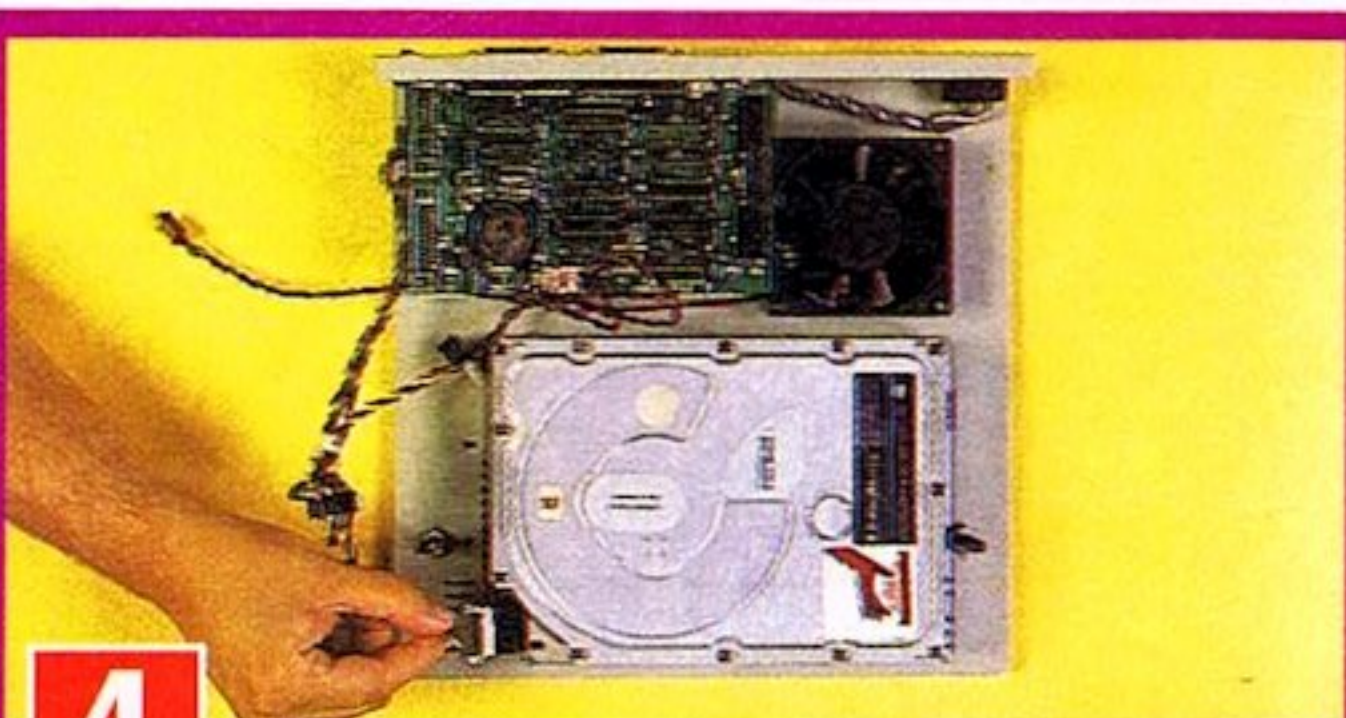
- 1** The ICD FA.ST hard drive kit is supplied almost completely assembled. The power supply and ICD host adaptor are already installed in the base of the case, all you have to add are the SCSI hard drive and the internal cable connections. We've used an old 40MByte 5.25inch Apple hard drive.



- 2** You need to see if the drive fits into the case. 5.25inch drive mechanisms are large and bulky by current standards, but you should be able to find a suitable set of fixings for almost any drive. The case is big enough to accommodate anything up to a half-height 5.25inch hard drive without any trouble.



- 3** Screw the drive firmly to the case. Fixing screws are supplied when you buy a new hard drive. If you buy a second-hand drive it's doubtful that they are provided. But it's not a problem, drive fixing screws are generally a standard size so you shouldn't have any difficulty obtaining a set.



- 4** Next, connect the power cable to the drive, the connector is a large 4-pin plug that fits into the socket on the drive - it only fits in one way. The main power connector block may not be connected to the power, it's a large brown connector that plugs into the left end of the power supply.



- 5** Now connect the 50-way SCSI ribbon cable to the socket on the hard drive. The connector can only fit into the socket one way up. A lug on one side of the plug matches a notch in the top of the socket to ensure a correct connection. The main power connection is on the left of the picture.

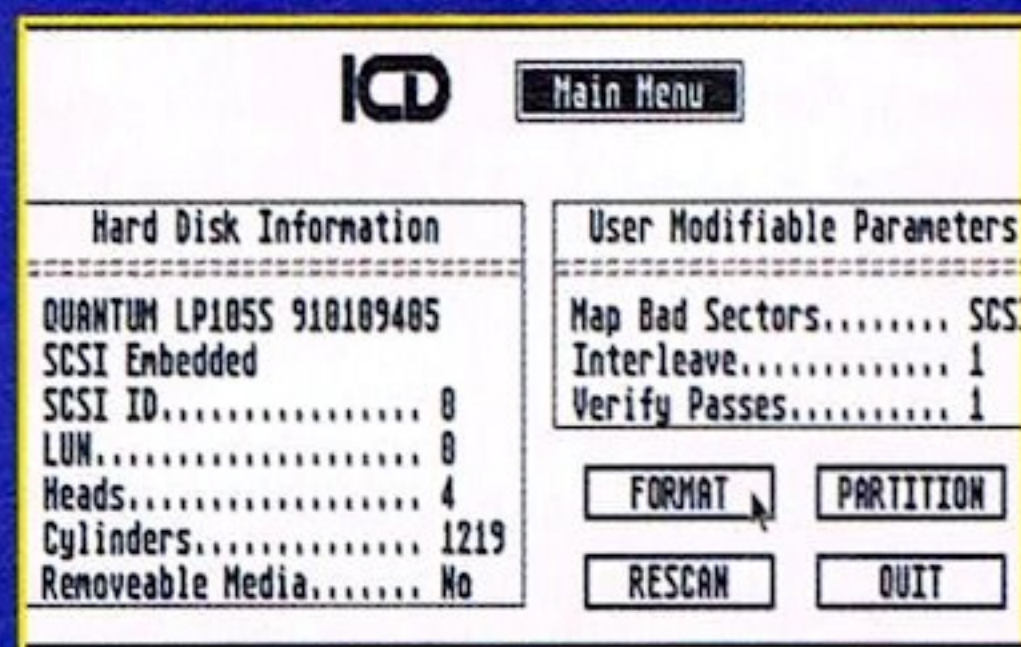


- 6** The centre connection of the ribbon cable plugs into the socket on the ICD host adaptor board - using the lug and socket method to align it correctly. The last connection is the external SCSI socket, this enables SCSI devices such as CD-ROM drives to be directly connected via the host adaptor.

MADE EARLIER

Using the software

When you have built your hard drive and connected everything up to your ST you have to format and partition the drive. The FA.ST kit from First Computer



■ Running the formatting program enables you to start work on your drive. The software identifies the mechanism and enables you to perform the initial format, this can take several minutes.

No.	Start	End	Size	Type	Name	On
1	3	51392	26.31	BGM		✓
2	51393	102782	26.31	BGM		✓
3	102783	154172	26.31	BGM		✓
4	154173	205559	26.31	BGM		✓
5						
6						
7						
8						
9						
10						
11						
12						

■ After formatting the drive is still unusable, you have to partition it. This splits the physical hard drive up into several "logical" drives, each of which can have its own drive icon.

Centre uses the ICD Hard Drive Utilities, generally regarded as the best available. Full instructions are included with the software to get you up and running



■ After partitioning the drive your next job is to tell it to auto-boot when you switch on your ST. The HD utility program enables you to select the partition to boot from, you should use drive C.



■ Once you have set drive C to auto-boot you must set the configuration. Hard drive functions such as caches, extra folders, initial screen resolution and the setting of the system time are set from here.

may find that you can buy used 100MByte drives for as little as £50 or new 240MByte drives for under £300.

Buying your kit

Obviously you need to get all the bits and pieces before you build your hard drive. These are the essentials required; a SCSI hard drive mechanism, a host adaptor, a

regulated power supply unit, a case and various cables and leads.

All the above, with the exception of the hard drive mechanism, can be obtained from the First Computer Centre (☎ 0532 637988) for £199. The kit contains instructions and all the formatting and partitioning software you need.

The last item you need is a SCSI hard drive mechanism. You

can buy drives second-hand from computer auctions and from trade advertising magazines, at auctions all goods are bought "as seen" while drives bought through private ads are normally OK. You can buy second-hand 40MByte drives for as little as £30, but you probably need to shop around a bit. Buying new SCSI drives is relatively inexpensive these days, prices

have dropped dramatically and many PC magazines sell drives direct to the public.

Remember that most prices in PC mags do not include VAT. First Computer Centre sell bare hard drives at good prices, although it may be cheaper to buy a complete drive from them in the first place if you are going to use their kits and drives. **stf**

So you've decided to take the plunge and build your own hard drive - good idea! The ICD FA.ST kit from First Computer Centre uses the ICD host adaptor and ICD Utilities, probably the best set of hard drive utilities in the world. It's perfect for any size of SCSI drive.

Building the ICD FA.ST drive isn't very difficult, you should be able to complete the

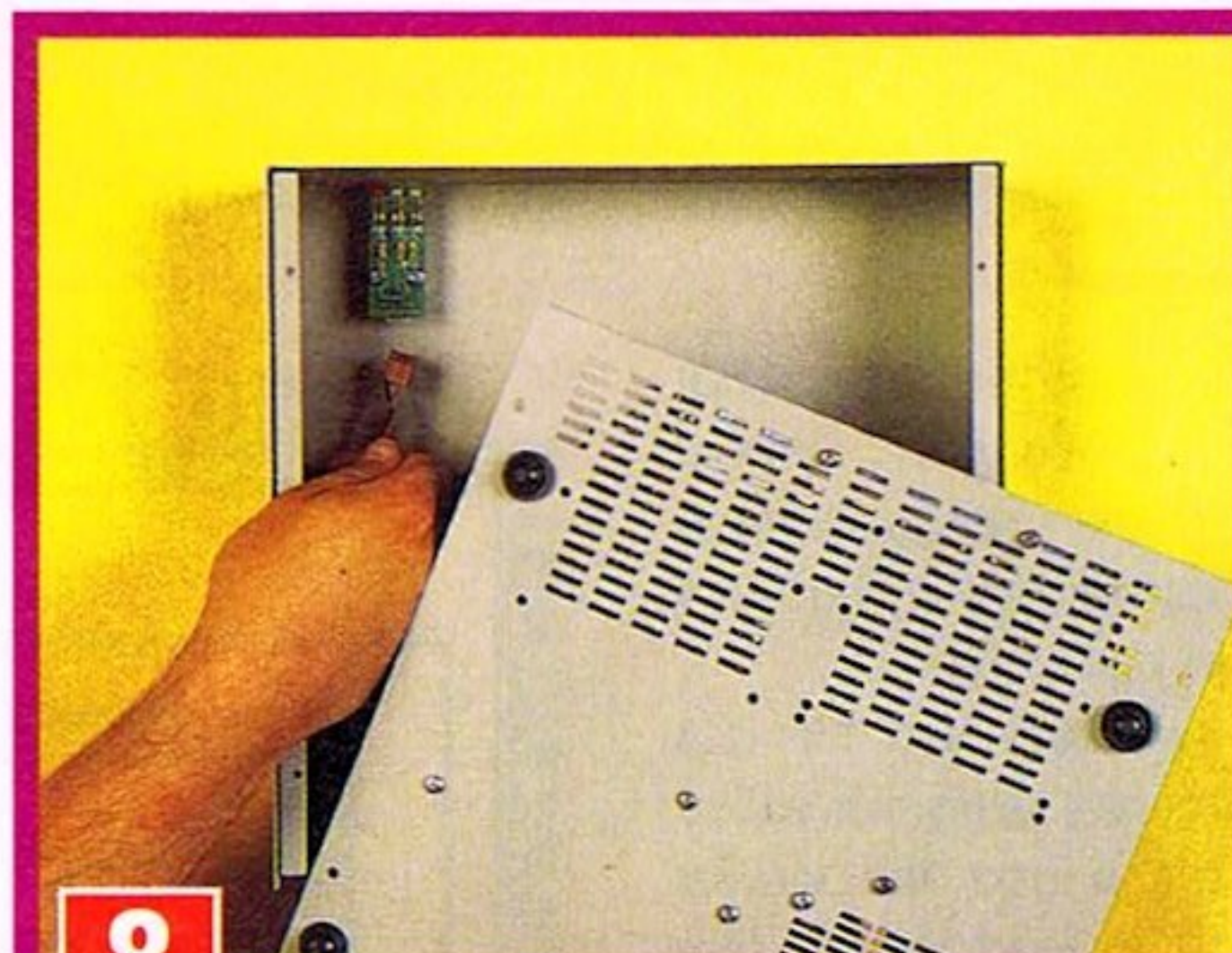
entire job in under an hour without any problems - even if you're a complete novice at DIY. Everything you need is included in the kit, with the major exception of the actual hard drive mechanism itself.

The only part of the kit that could cause you a problem is installing the SCSI ID switch. There are no instructions about fixing it in the

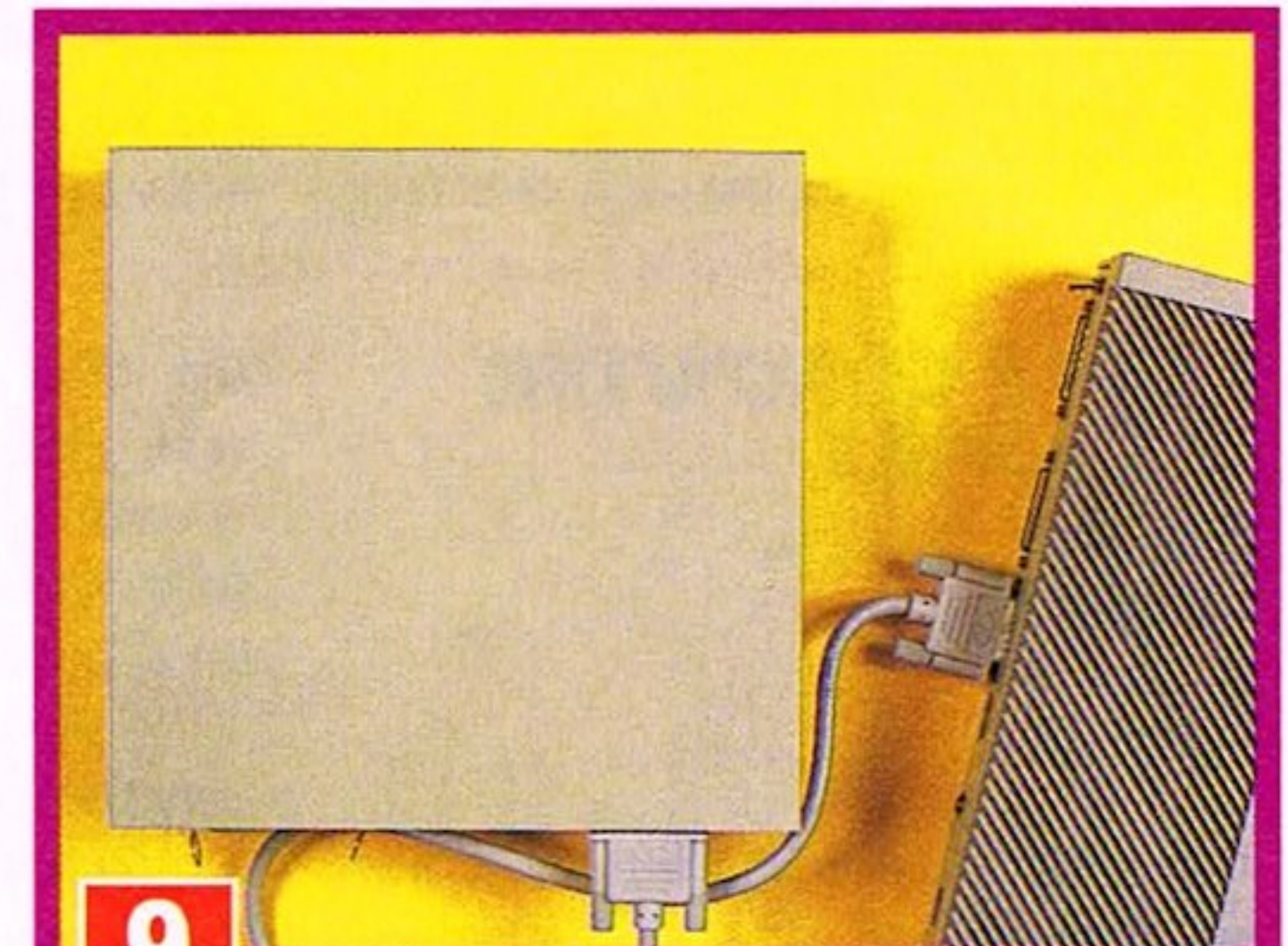
manual, and it must be soldered to the correct points on the hard drive so that you can change the ID. Without having the switch fitted your SCSI drive automatically defaults to SCSI ID 0. Because every hard drive has a different layout we have not shown the ID switch being installed in the walkthrough. If you have any problems, contact your supplier.



7 Insert the external SCSI socket into the slot provided and screw into place using the nuts and bolts supplied. It's best to tidy up the ribbon cable so that you don't trap it when you are putting the lid on the drive. The ribbon cable can easily be folded to enable the lid to be easily fitted.



8 Inside the lid of the hard drive case there is a small circuit board containing the power and disk access LEDs. A data cable connects to a socket on the circuit board, you must connect the plug when you are putting the lid on the drive. You can't connect it in earlier because the cable isn't long enough to reach the socket.



9 Once you have plugged in the power and activity cable, slide the lid onto the bottom half of the case and screw into position. Once you have done this the drive is ready to connect to your ST, the DMA cable supplied plugs into the socket marked "Computer In" on the hard drive and the DMA socket on the back of your ST.

SOFTWARE MARVELS

■ Using the 55 piece set can be very confusing if you've only used the standard domino set.

Not all software is ridiculously expensive, there are hundreds of top quality programs, games and utilities lurking in the shadows and just waiting for you to discover them

Many Shareware, PD and independently produced programs tend to be overlooked or ignored because they're so inexpensive. In fact, a high percentage of this software is very good and deserves better recognition – that's where we come in. Every month we look at independent software on offer that doesn't cost a small fortune. This month we feature *Club Dominoes*, a great version of Dominoes enabling

you to play several versions of the game using either a double-six set or a double-nine set. The other program is the *Giant Computer Glossary*; a large text file explaining every techie term you're ever likely to come across in a computer magazine.

If you have created a particularly good program that you sell independently or as Shareware, send a copy to Indie Reviews, *ST FORMAT*, 30 Monmouth Street, Bath BA1 2BW.

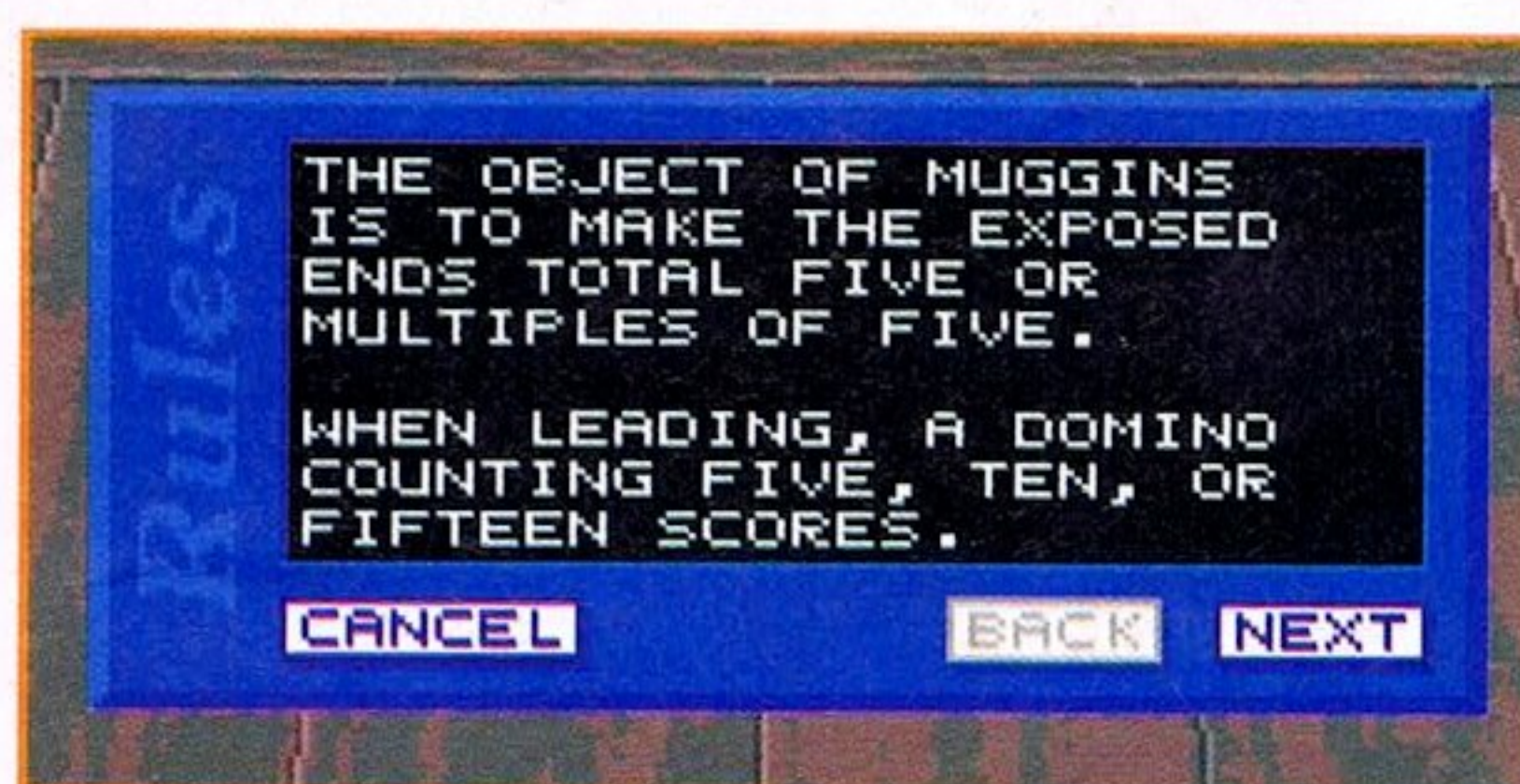
CLUB DOMINOES

PRICE: DM 56 TO REGISTER
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Dominoes is a popular game played all over the world by both adults and children, *Club Dominoes* consists of three different versions of the game; standard *Dominoes*, *Muggins* and *Bergen*.

You can play either against your ST or a live opponent via modem or MIDI connections. You can have different deck sizes; the standard 28 piece domino deck has pieces with values ranging from double-blank to double-six, while the 55 piece set ranges from double-blank to double-nine. The 55 piece deck is the size commonly used by northern pub leagues and takes a bit of getting used to if you are only familiar with the 28 piece version.

The game runs from floppy disk or hard drive, you just have to copy the CLUB folder to the root directory



■ If you're not sure about the rules of the particular game you have chosen, they can be displayed on-screen.

of one of your partitions and you're ready to play. You can run the game from medium or low resolution and the program has a comprehensive series of setup menus enabling you to enter the exact parameters for the variation you're playing.

The game has excellent graphics with a choice of three backdrops, although the music and spot effects are distinctly average. You can make the game as easy or as hard as you like by adjusting the difficulty level of your ST, in expert mode you haven't got a chance unless you're a real domino expert. One small drawback is that you can only play against a live

opponent if you connect two STs together via a modem, MIDI or null modem connection, and you can't adjust the difficulty level of your live opponents.

Gameplay is simple – just click on a piece to play it and try to beat your opponent. The easiest game is traditional *Dominoes* where you have to get rid of your pieces first, with your final score based on the number of points left on your opponent's dominoes. In the *Muggins* variation you have to make the total points of the two end dominoes add up to a multiple of five. *Bergen* is the last and hardest variation, in this game you have to make the two end values match to score points – not easy. *Club*

Dominoes is professionally written and works without fault on any ST, once you settle down for a quiet game, the time just flies by. Although *Dominoes* is not normally regarded as an exciting game, the variations present in this program provide several different strategy games which take a lot of working out and brain puzzling. The whole set holds your interest for ages, and keeps you coming back for more, time after time. So be aware of this before you leap in.



■ The main menu enables you to choose the variation of the game and set up the different options.

GIANT COMPUTER GLOSSARY

PRICE: £5.95
FROM: GOODMAN INTERNATIONAL
CONTACT: 0782 335650

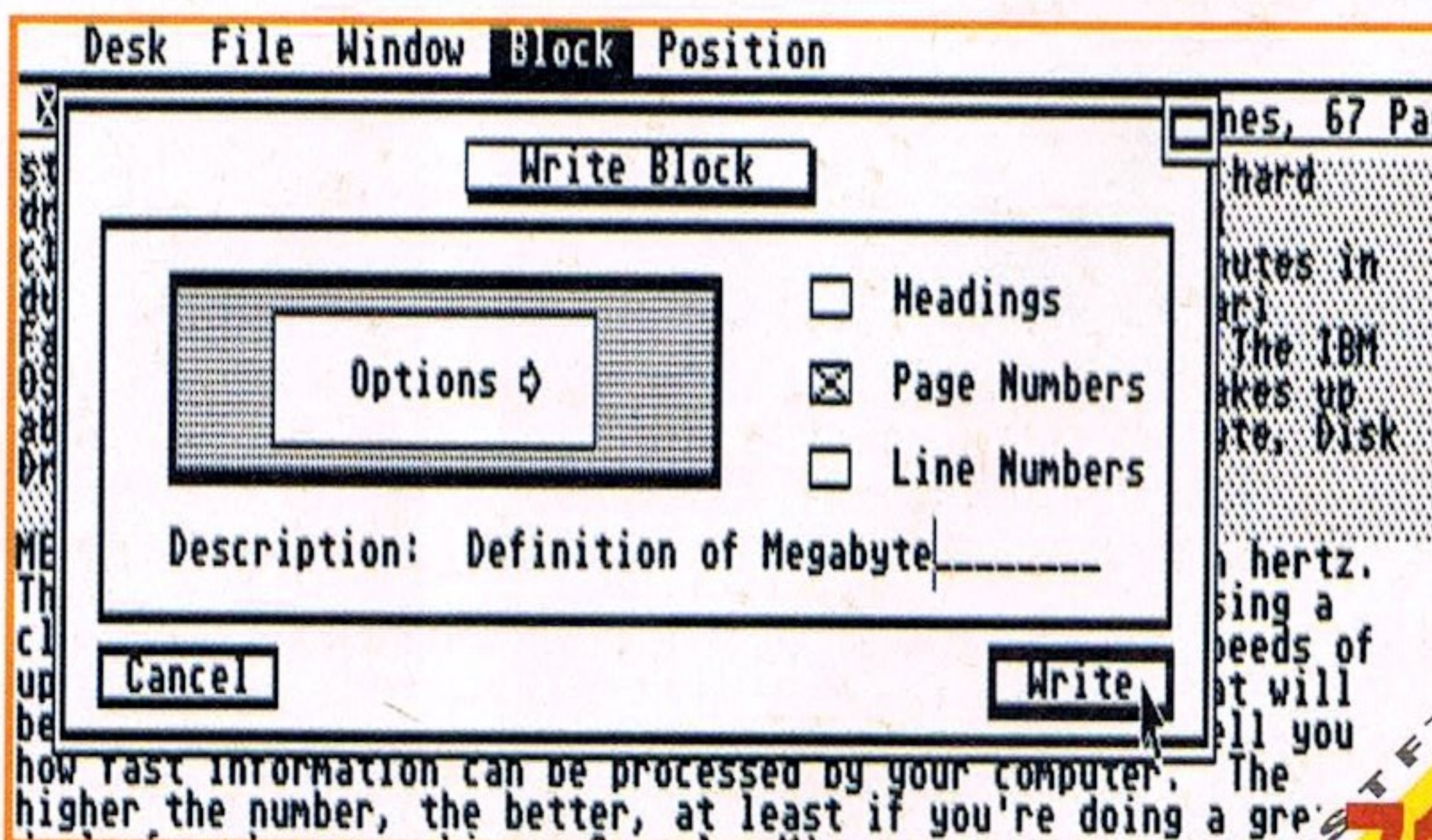
The *Giant Computer Glossary* is not actually a program at all, it's a giant 237K text file which could alternatively be called "Everything you always wanted to know about computers, but were afraid to ask."

The file really is huge, and contains definitions of everything from 68000 to Zoom Box written in an amusing North American way – in other words not very funny at all to

the often ironic British taste. That said, the glossary contains almost everything you're ever going to need to know about computers and quite a lot about Atari in particular.

Supplied with the text file is a very useful Shareware program called *MasterBrowse*, it's a text file viewer that enables you to load in text files in a single chunk and view them at leisure. The program is a combined text file reader, printer and editor enabling you to cut and paste information between several text files.

If you want to know more about the technical aspects of computing then this disk really is an indispensable mine of information.



■ An excellent text viewer is provided so you can look at the *Giant Computer Glossary*. Remember it's Shareware so there is a fee.

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RICOH LP1200 PCL5 LASER PRINTER

400 DPI 2Mb RAM 6 PPM £599

A4 TEXT/A5 GRAPHICS @ 400dpi • A4 GRAPHICS @ 300dpi. A 2Mb RAM UPGRADE IS REQUIRED TO PRINT A FULL A4 PAGE OF GRAPHICS AT 400dpi
HP LASERJET III™ COMPATIBLE • FLASH ROM UPGRADEABLE! + VAT

Ricoh, have used their expertise to produce a 'first' in laser printers, the LP1200 with FLASH ROM. HP LaserJet III™ compatible, the LP1200 employs industry proven laser technology which, unlike LED printers, uses a laser light source to produce the most accurate and intense printed images at a range of print resolutions up to 400dpi. A fast efficient processor and engine, plus a straight paper path design allows printing at a full 6 pages per minute. The 2Mb RAM version prints a full A4 page of text or graphics at 300dpi. Using standard resident fonts and the alternate controller firmware supplied, it can also print an A4 page of text or A5 page of graphics at 400dpi and, using the Windows driver supplied, an A4 page of text at 400dpi from Windows 3.1.



SHOWN WITH UNIVERSAL FEEDER TOP TRAY (OPTIONAL EXTRA)

The 4Mb RAM version can print a full A4 page of graphics at 400 dpi and makes full use of the LP1200's 400 dpi printing capabilities, such as using Microsoft Windows fonts. Unique additional standard features include FLASH ROM 'future proof' technology and LAYOUT - a powerful document description language. The LP1200's unique internal FLASH ROM, which holds the printer controller firmware, can easily be updated as new developments in technology occur. This protects the investment you make in buying a Ricoh LP1200. Other manufacturers would require you to buy a new printer! Internal FLASH ROM and industry standard FLASH ROM PCMCIA cards can also be used to permanently store fonts, macros, graphics and extra emulations. Again, unlike the competition, the LP1200 includes LAYOUT, a powerful and intuitive document description language as standard. This offers unique opportunities to develop custom made printing systems. Forms and document templates can be designed complete with logos and stored electronically in the LP1200's FLASH ROM, alleviating the need for pre-printed forms!

The LP1200 comes with a 100 sheet A4 paper tray as standard. An optional universal feeder automatically feeds up to 150 sheets of paper (up to 169gsm), 15 envelopes, transparencies and labels.

CONSUMABLES + ACCESSORIES

PRODUCT CODE	PRODUCT DESCRIPTION	PRICE EXC VAT
CAB 7500	Cable for PC/ST/Amiga	£8.47
KIT 5200	Laser Starter Kit inc Cable	£12.50
LAA 5238	Universal Feeder (2nd Tray)	£85.00
LAA 5262	2Mb RAM Module	£85.00
LAA 5210	Developer/Toner Cartridge	£65.00
LAA 5225	OPC Cartridge (Drum)	£89.00
LAA 5312	A4 Paper Tray (100 Sheets)	£35.00
FAX 1200	Ricoh Fax/Modem Software/Firmware	£120.00
MOD 7199	Pace Microlin FX Fax/Data Modem	£180.00
LAA 5279	Ricoh Flash ROM Card (0.5Mb)	£49.00
LAA 5288	Ricoh Flash RAM Card (1Mb)	£199.00
LAA 5290	Ricoh Flash RAM Card (4Mb)	£599.00

All Prices are Exc VAT - CALL FOR A FULL PRICE LIST

*Note: A4 paper tray is already included in the printer price. More A4 trays can be purchased to feed different coloured stationery.

FEATURES	IBM 4029-020	FUJITSU VM600	CANON LBP-4 PLUS	STAR 8III	RICOH LP1200
Average Street Price (excl. VAT)	£929	£899	£659	£899	£699
Maximum resolution in dots per inch	300 x 300	300 x 300	300 x 300	300 x 300	400 x 400
Windows 3 Driver @ 400 dpi	-	-	-	-	YES
Print Speed	6ppm	6ppm	4ppm	8ppm	6ppm
Straight Paper Path	-	NO	(ONLY FACE UP)	YES	YES
PCL 5 Printer Command Language	-	YES	-	YES	YES
HP-GL/2 Vector Graphics included	YES	YES	-	YES	YES
Resolution Improvement/Enhancement	YES	YES	YES	YES	YES
Standard RAM	1Mb	1Mb	512K	1Mb	2Mb
Full A4/300 dpi graphics with standard RAM	-	-	-	-	YES
Warm Up Time	33 secs	25 secs	<60 secs	60 secs	45 secs
First Page of Text Output	-	15 secs	31 secs	18 secs	<15 secs
Document Description Language included	-	-	-	-	YES
Flash ROM	-	-	-	-	YES
Flash ROM Upgradeable Firmware	-	-	-	-	YES
PCMCIA Card Slot	-	-	-	-	YES
Scaleable Resident Fonts - in HP LJ III Emulation	0	8	0	8	8
Resident Bit-Mapped Fonts	10	14	2	14	14
AGFA Intellifont Scaleable Font Technology	-	YES	-	YES	YES
HP LaserJet III Emulation Included	-	YES	-	YES	YES
EPSON FX Emulation Included	-	YES	YES	YES	YES
IBM ProPrinter Emulation Included	-	YES	YES	YES	YES
Standard Tray Capacity	200	150	70	200	100
Protective cover on standard tray	YES	-	YES	YES	YES
Cost per copy**	1.9p	2.0p	2.1p	2.2p	1.65p
Min-Max Paper Weight in gsm	60-163	60-157	60-105	60-135	60-169
Ability to print on OHP Film	YES	YES	YES	YES	YES
Ability to print on 169gsm card (Manual Feed)	-	-	-	-	YES
Standby - Noise Level	38dB(A)	35dB(A)	<43dB(A)	<43dB(A)	<38dB
Printing - Noise Level	50dB(A)	46dB(A)	<53dB(A)	<53dB(A)	<48dB
PC Independent PLAIN PAPER FAX OPTION	-	-	-	-	YES

**As quoted by manufacturers - July '93

E&OE All Trademarks are acknowledged



PLAIN PAPER FAX OPTION

ONLY £120

The LP1200 is the World's First Laser Printer to have the option of being upgraded to a PC independent plain paper fax. Just download the software (£120+VAT) into the LP1200's Flash ROM and connect any fax/modem to the Serial Port (we recommend the Pace Microlin FX - £180+VAT). Using the Windows and DOS software supplied you can send and receive Laser quality faxes all over the world!

FAX/MODEM SOFTWARE FEATURES - £120+VAT - FAX 1200

- Combine 2 or 4 faxes onto one page (A4)
- Greyscales, 3 types of images - Photographic, Line Art, Ricoh Scanned
- Phone number directory (using Windows driver)
- Broadcast (using Windows driver)
- Windows and DOS version
- Receive faxes when PC is switched off
- Use printer for printing while receiving faxes in background mode
- Use LaserJet or Layout protocol documents
- Send faxes from any Windows application

MODEM/HARDWARE FEATURES - £180+VAT - MOD 7199

- CCITT Group 3 send/receive
 - Laser quality output
 - Automatic retry on busy (x3)
 - Memory useable - 2Mb (upgradeable to 4Mb)
 - Document macros
 - PCMCIA/Intel flash card firmware module available
 - A4 paper - but can receive A3 pages scaled down to A4 - 300 dpi. Can send A4 pages scaled up to A3 - 300 dpi
 - Out of paper receive
 - 9600 baud Fax modem
 - 2400 baud Data modem
 - Hayes compatible - UK manufacture
 - 5 year warranty on modem
 - Includes: fax/modem, software, mains adaptor, serial cables, PSTN connection lead and manuals
- FOR PCs & COMPATIBLES ONLY

- **6 PAGES PER MINUTE**
- **2Mb RAM AS STANDARD**
Upgrade to 4Mb RAM only £85+VAT - see below
- **PCL5 - INC HP-GL/2**
With scalable fonts and vector graphics
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Ricoh FIAL (Fine Image Algorithm) enhances resolution
- **400dpi RESOLUTION**
(Default res. - 300dpi. Will address 200, 240 & 400dpi)
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For controller upgrade and storage
- **PCMCIA CARD SLOT** (PCMCIA/JEIDA Compatible)
For programmable FLASH ROM cards
- **EXPANSION BOARD SLOT**
For improved connectivity eg. Coax/Twinax, PC-LAN etc
- **LAYOUT** Document Description Language
- **SERIAL + PARALLEL PORTS**
- **1 YEAR ON-SITE WARRANTY**
Next working day response

FREE DELIVERY

LP1200 WITH SINGLE BIN & 2 Mb RAM LAS 5200 **£599** + VAT = £703.83

RAM UPGRADE - 2Mb to 4Mb (LAA 5262) **£85 + VAT**
UNIVERSAL FEEDER (LAA 5238) **£85 + VAT**
FAX OPTION Requires a modem (FAX 1200) **£120 + VAT**
MODEM Pace Microlin FX for Fax Option (MOD 7199) **£180 + VAT**



SILICA OFFER YOU

Before you decide when to buy your new laser printer, we suggest you think very carefully about WHERE you buy it. Consider what it will be like a few months after you have made your purchase, when you may require additional peripherals or consumables, or help and advice. And, will the company you buy from contact you with details of new products? At Silica, we ensure that you will have nothing to worry about. With our unrivalled experience and expertise, we can meet customers' requirements with an understanding which is second to none. Complete and return the coupon now for our latest FREE literature and begin to experience the "Silica Service".

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ESSEX SHOP:	Keddies (2nd Floor), High Street, Southend-on-Sea, Essex, SS1 1LA	Tel: 0702 468039
Opening Hours: Mon-Fri 9.30am-5.30pm (Sat 9.00am-6.00pm)	Late Night: Thursday - 7pm	Fax No: 0702 468039
IPSWICH SHOP:	Debenhams (2nd Floor), Waterloo House, Westgate St, Ipswich, IP1 3EH	Tel: 0473 221313
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PLEASE SEND INFORMATION ON RICOH LP1200

Mr/Mrs/Miss/Ms: Initials: Surname:
 Company Name (if applicable):
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 Tel (Home): Tel (Work):
 Which computer(s), if any, do you own? 75W

E&OE - Advertised prices and specifications may change - Please return the coupon for the latest information.

**PAINTSHOP PLUS****PRICE: £15****FROM: NEW AGE PDL****CONTACT: PO BOX30****ESSEX S59 4AD**

Paintshop Plus is an excellent Shareware high resolution paint package for the ST and Falcon. Originating from Germany, the program has been translated into English and a guide to using the program has been supplied on the disk.

Paintshop contains all the usual painting options with a few of its own thrown in for good measure. You can access all the main drawing options from three pop-up menus called by a right mouse click, clicking on the bar at the top of the pop-up menus toggles between the three modes. It's all very intuitive, after using the text file for reference for the first few times,

you probably won't need to refer to the guide again unless it's for some specific technicality.

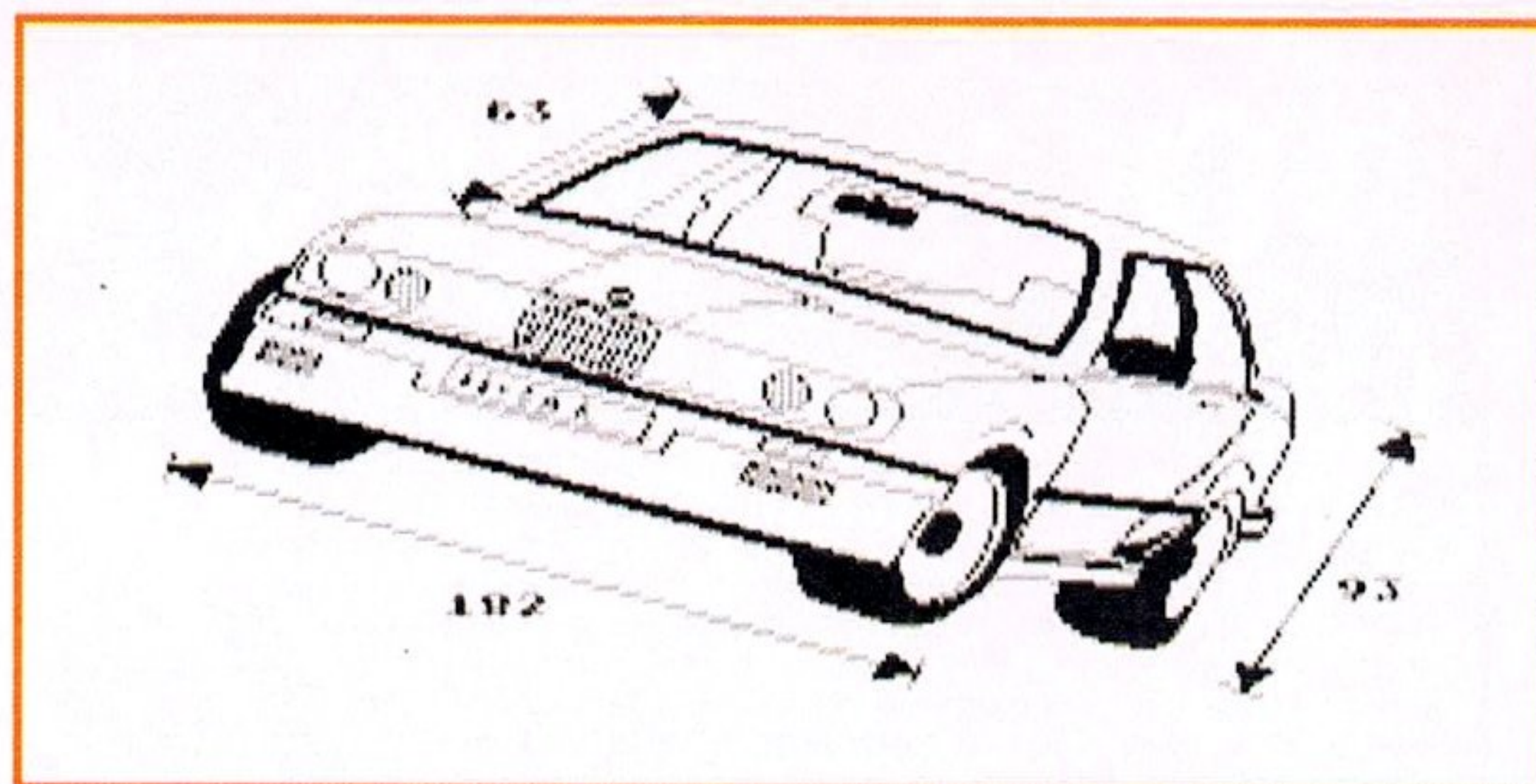
It's easy to use

Selecting options is easy enough, it's also dead simple to configure the drawing options. Along the bottom of the screen is a bar with 16 options, clicking on any of these enables you to configure the drawing functions. You can configure everything from spraycan size to fonts and line types, it's extremely adaptable and you can create some excellent effects.

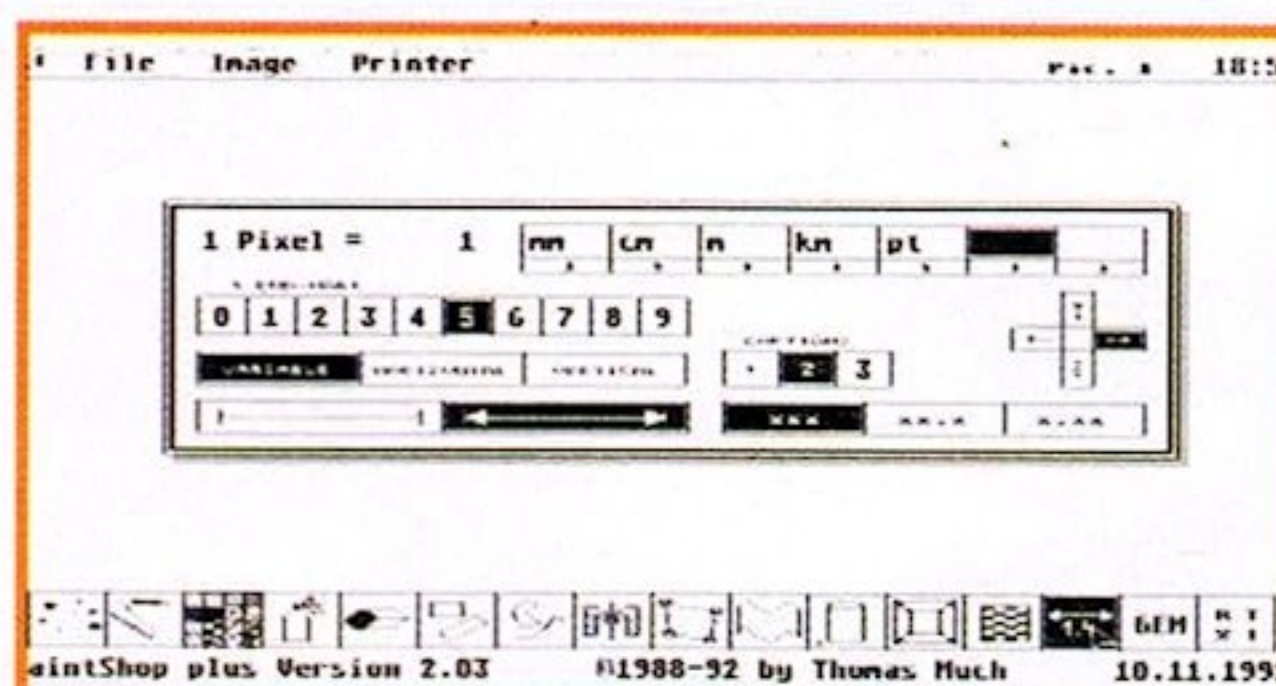
Unusually for a Shareware package, *Paintshop* includes some distinctly CAD-style functions normally found in commercial programs. Functions such as line dimensioning and automatic parallel lines enable you to create complex technical drawings with ease.

The zoom mode is very detailed, with the added options of drawing using shapes instead of the more usual pixel by pixel modes employed by other art packages. The program is littered with other

A comprehensive fill designer and editor is just one of the excellent configuration options in *Paintshop Plus*.



Measuring those vital bits on the drawing you've created. Dimension lines can be extended by using the parallel line functions in the pop-up menus.

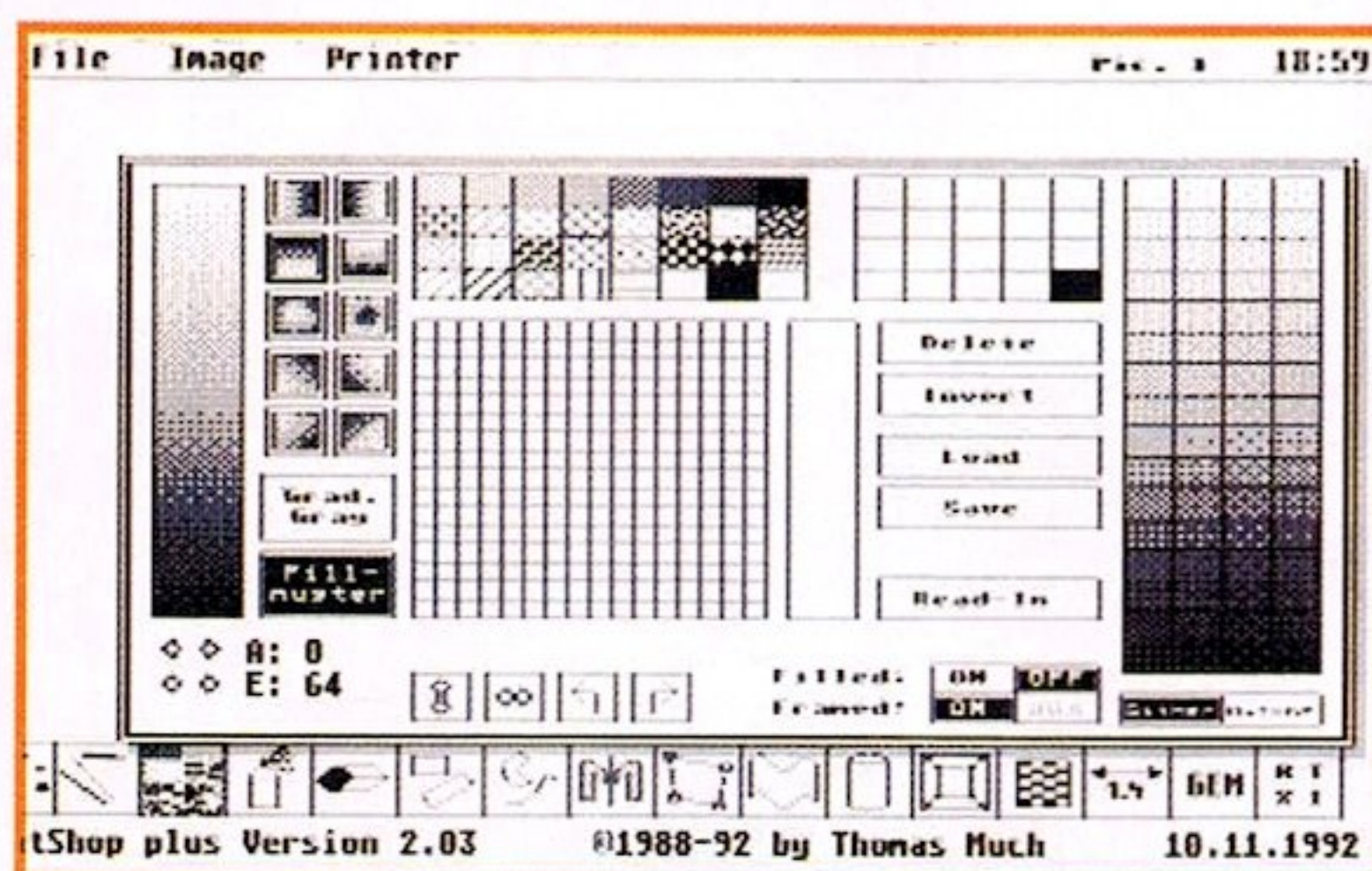


When you're designing those hi-tech engineering drawings you're going to need some way of measuring things. This menu enables you to set up the dimension parameters.

Verdict

At least 1MByte of RAM is needed to run the program and a high resolution monitor or good mono emulator is required, it works well on the Falcon in high resolution compatibility mode but it doesn't like MultiTOS. *Paintshop* is a good – but not brilliant – graphics program that covers the needs of all but the most demanding artist. If you get it then then you'll use it. **stf**

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RATING



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STF12

(We reserve the right to reject machines which, in our opinion, are beyond repair- Normal charge applies)

CLASS OF '93

Ah, the time has come for **ST FORMAT** to peer back into the mists of time, and compile the essential guide to our reviews from the past 12 months...

Here at *ST FORMAT* we review loads of ST games, hardware and serious software every month, and keeping track of them all can be a bit of a chore. We've taken all of the work out of it for you, and indexed all the reviews from the last 12 months. If you've been with us for years you may remember we indexed everything ever reviewed in *STF 32* – up to issue 39 This was

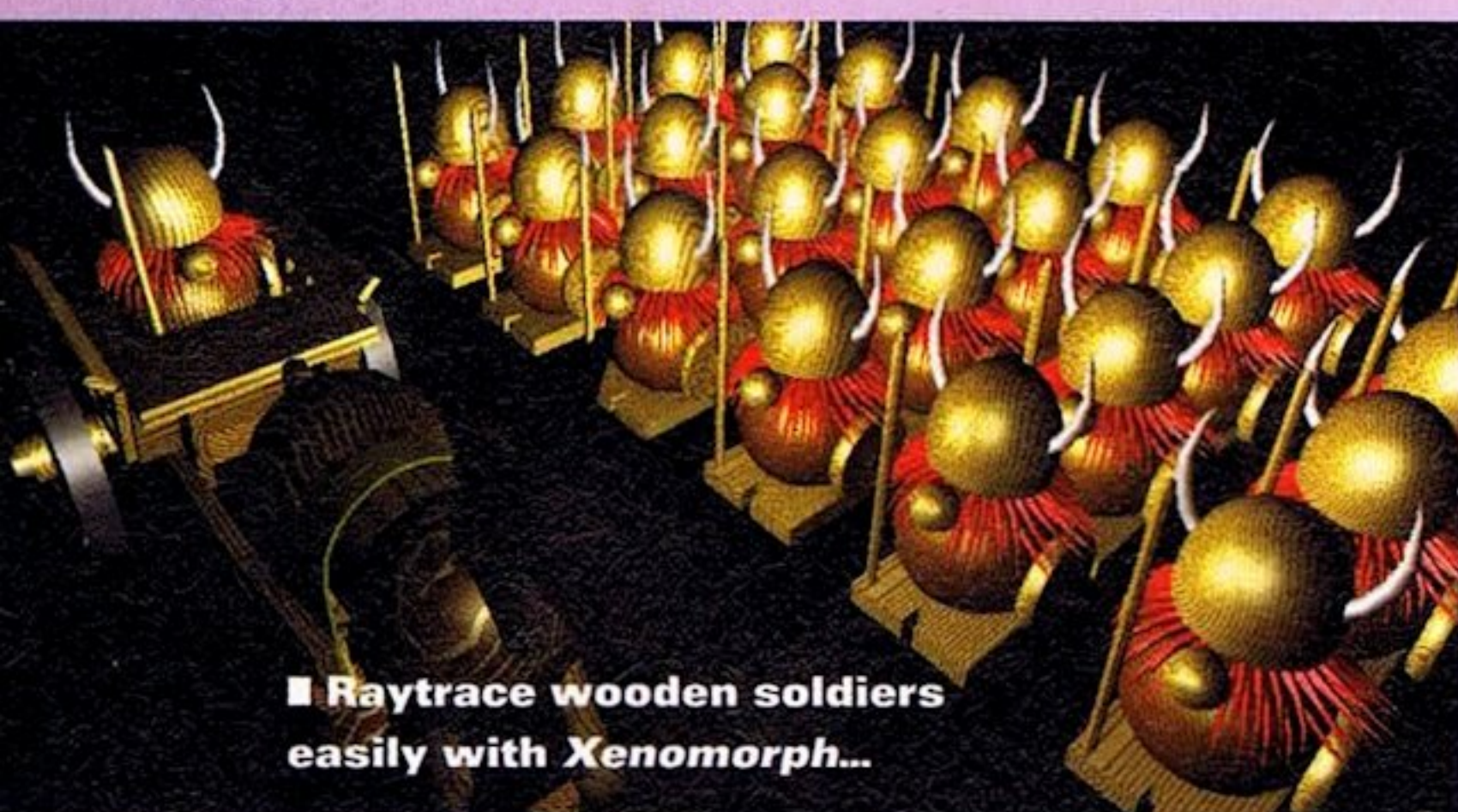
brought up to date in *The Best of ST Format* – see Mail Order page 104. We've reviewed so much stuff since then, we just haven't the space to fit it all in. So, here follows all reviews from issue 40 onwards. Remember: Cover Disk and PD programs are not included, and only specific reviews are indexed. Where products have been re-reviewed, in a round-up for example, only the most recent rating is given. Let's go...

SOFTWARE

Title	Original supplier	Issue	Rating
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ART AND GRAPHICS

Chronos 3D	16/32 Systems	48	87%
Convexor Pro 1.00j	Compo	46	75%
DA's Vector	CGS	48	92%
Degasart V2.0	Markotek	45	75%
Image Cat 2.1A	Ladbroke	43	78%
Imagecopy Colour	ST Club	45	85%
Imagecopy 2	ST Club	49	91%
Photo Show	It's All Relative	52	81%
Silhouette	Ladbroke	40	78%
Touch-Up	Gasteiner	40	85%
TruePaint Falcon	Hisoft	47	82%
Xenomorph	16/32 Systems	47	93%



Raytrace wooden soldiers easily with **Xenomorph**...

BUSINESS

Biz Accounts	Orpheus	47	84%
Dragon Graph	16/32 Systems	52	68%
Fastbase 2	PD	46	83%
Financier	STF Disk 36	46	83%
Home Accounts 2	Digital International	46	90%
K-Spread 2	Kuma	46	81%
LDW Power	Silica	46	84%
Monotari Finance Manager	PD	46	78%
Opus 2.2	PD	46	85%
Superbase Professional	Hisoft	46	86%
Super Card 2	STF Disk 35	46	89%

WORD PROCESSORS/EDITORS

Calligrapher Gold	Working Title	51	88%
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DB Writer	PD	46	91%
Protext 4.3	Arnor	46	80%
Redacteur Jr	ST Club	44	88%
Redacteur 3	ST Club	46	90%
That's Write 2	Compo	45	90%

DESKTOP PUBLISHING

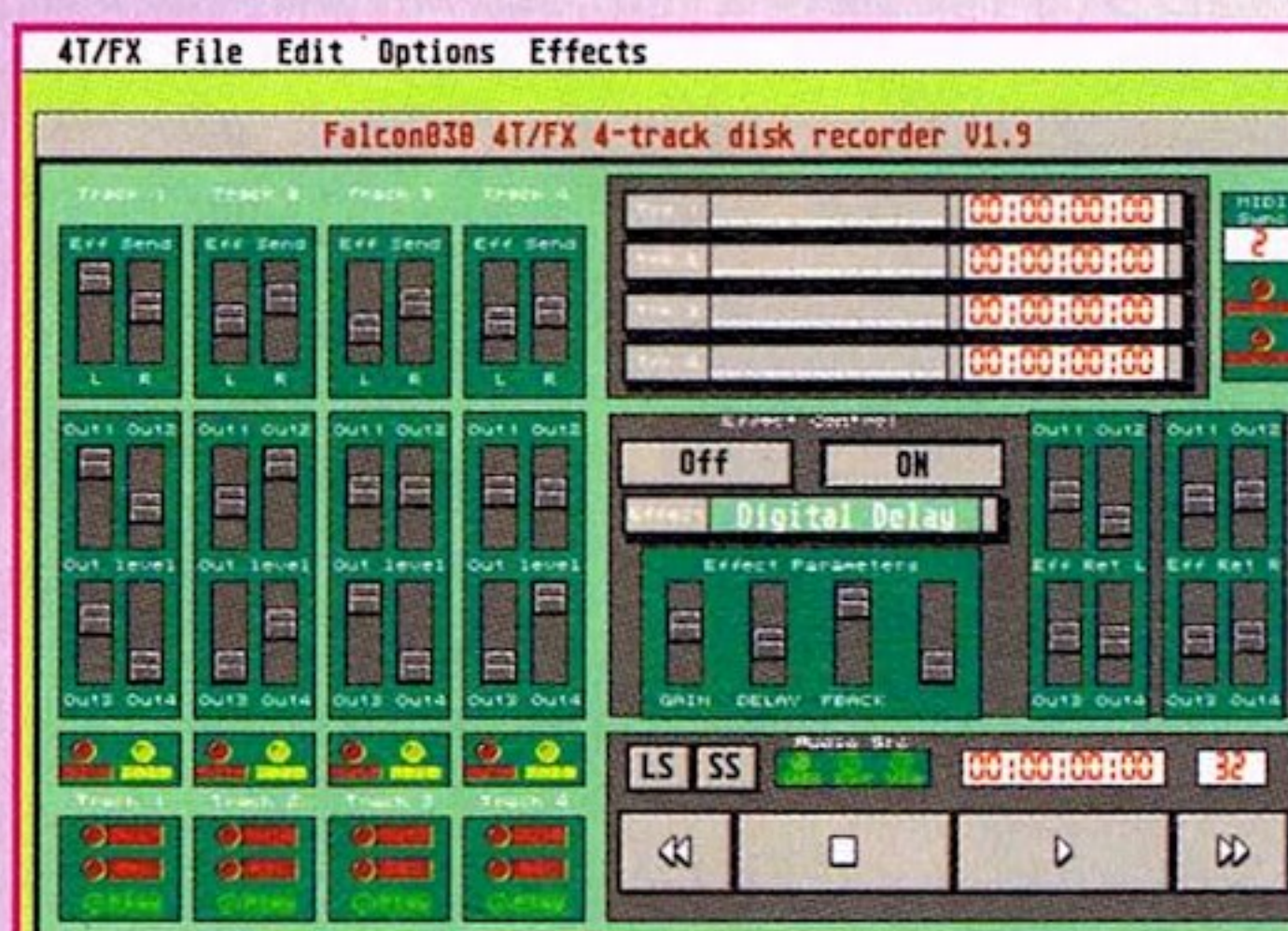
Arabesque Pro 2.15	Compo	45	80%
Calamus S	Halco	46	91%
Calamus SL	Halco	43	89%
Easy Text Pro	zzSoft	47	90%
Pagestream V2.2	Silica	41	91%
Pagestream 2	Silica	46	94%
Printing Press	PD	46	82%
Timeworks Publisher	Electric Distb'n	43	88%

EDUCATIONAL

ADI French 11/12& 12/13	Europress Software	44	92%
Jigsaw	Dolphin Soft	52	78%
Let's Spell First 500 Words	Squirrel Soft	44	91%
Mr Smart's Big Time	MT Software	52	74%
Noddy's Playtime	Jumping Bean	43	90%
Pitch Trainer	Music Express	48	84%
Playdays	Alternative	44	73%
Rhythm Trainer	Music Express	48	84%
Theory Trainer 1	Music Express	48	84%
Theory Trainer 1	Music Express	48	84%

MUSIC

4T/FX with	D2D Systems	48	88%
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Record music and sounds direct to disk with **D2D's** excellent software. It turns your Falcon into a complete four-track digital recorder!

D2D (Falcon)			
Alchimie Junior	PD	46	92%
Ambient Sample CD	Time & Space	40	80%
Breakthru	Gajits	47	90%
Cubase	Harman Audio	46	91%
Danger1 CD	Dangerous	40	88%
Datafile 3 CD	Time & Space	40	94%
Digit Soundtracker	Galactic	52	91%
Ethnic CD	Music Suite	40	75%
Funky Element	Time & Space	40	78%
Hitsound CD	AMG	40	85%
John the Composer	Newtronic	49	70%
KCS Omega	Dr T's	44	58%
Notator Logic	Sound Technology	51	91%

Pro 12	STF Disk 39	46	80%
Sample cassettes	Big Time Prod'ns	40	70%
Sample cassettes	Soundwaves	40	68%
STOS Maestro Plus	Mandarin	41	79%
MIDI Files	Words and Music	46	83%
X-Static CD	Time & Space	40	92%

PROGRAMMING

Devpac 3	Hisoft	44	91%
GFA Basic 3	GFA	46	91%
Sozobon C	PD	46	80%

UTILITIES

Address V1.6	ST Club	48	72%
Datalite 2	Hisoft	48	88%
Diamond Back 2	Ladbroke	41	92%
Diamond Edge	Hisoft	45	90%
Edhak 2.35	Clear Thinking	42	67%
Hard Drive Turbo Kit	Ladbroke	41	58%
Hotwire	Atari Workshop	41	78%
ICD Cleanup ST	Atari Workshop	42	79%
ICD Pro Utilities	Ladbroke	49	85%
Maxifile 3	Atari Workshop	41	73%
Migraph OCR	Gasteiner	41	79%
Monulator, The	Goodmans	44	78%
Multidesk Deluxe	Atari Workshop	41	78%
Multiprint	ST Club	40	90%
NVDI 2.5	System Solutions	51	85%
Scanlite	Ladbroke	41	78%
Speedo GDOS	Hisoft	50	92%
Stalker 3	Compo	46	89%
Superboot 7.4	STF disk 36	41	67%
View 2	ST Club	51	83%
X-Boot	Atari Workshop	41	60%
X-Boot 3	Hisoft	45	91%

MISCELLANEOUS

3D Construction Kit 2	Domark	46	90%
Beginners Guide to STOS	MT Software	52	76%
Circuit Designer V1.1	Darren P Goodwin	45	75%
Crazy Sounds	Maxon Computer	49	78%

Fonty 1.0	ST Club	45	82%
Formfinder V2.1	Aztec Software	42	69%
Kuma Klip Art	Kuma	44	70%
STeno Stenographer	Compo	48	78%
TKR Tele Office	System Solutions	50	68%
Type Write Clip Art	ST Club	44	75%

HARDWARE

ACCELERATORS

ICD Adspeed STE	HCS	42	81%
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FLOPPY DRIVES



■ Go on - give your ST a extra floppy drive. Soon you won't know what you did without one...

Atin Electronics 1.44MByte	Gasteiner	46	80%
Cumana CSA 354	1st Computer Centre	46	90%
Evesham Micros	Evesham Micros	46	81%
High Density Drive	Gasteiner	42	72%
Power 720B	Power Computing	46	78%
Power 720P	Power Computing	46	74%
Zydec	1st Computer Centre	46	82%

HARD DRIVES

ICD Fast Hard Drive	1st Computer Centre	50	83%
S120F SCSI (Falcon)	System Solutions	48	85%

OTHER DRIVES

Floptical Drive	Ladbroke	41	77%
Floptical Drive	Ladbroke	48	82%
Optical Drive	Power Computing	49	76%

MICE, TRACKBALLS AND JOYSTICKS

Apache	Quickshot	50	76%
Bio-Con Pen Mouse	Ladbroke	49	70%
Bollistick	Cheetah	44	90%
Characteristics	Cheetah	44	43%
Competition Pro 5000	Power Play	50	71%
Freewheel	Spectravideo	46	76%
Golden Image Mouse	Ladbroke	42	73%
Golden Image Optical Mouse	Ladbroke	42	75%
Maverick 1	Quickshot	50	80%
Mouse Yoke	RC Simulations	44	53%
Navigator	Konix	50	64%
Optical Pen Mouse	Gasteiner	49	81%
Python 1	Quickshot	50	83%
Speed King	Konix	50	52%
Sureshot Standard	Power Play	50	68%
Turbo 2	Quickshot	50	79%
Zipstick	Power Play	50	84%

MODEMS

Best Smart One 2400	HCS	40	68%
Supra V32bis Fax Modem	1st Computer Centre	44	85%

Supra Modem 2400	1st Computer Centre	42	77%
TKR Fax Modem	System Solutions	50	81%

MONITORS

MM-100 VGA Mono	1st Computer Centre	50	73%
Viewtek 12" Greyscale	Silica	46	75%
VGA Mono	Gasteiner	46	72%
VGA Mono	Ladbroke	48	76%
SVGA Mono	System Solutions	49	86%

GRAPHICS

Crazy Dots	System Solutions	45	93%
Reflex Graphics	Titan Designs	45	90%

MUSIC

Feeling Partner	Music Pro	40	85%
Genedit	Atlantic Audio	40	82%
Replay 8	Microdeal	41	82%
Sample Star	Galactic	52	79%
SY-35 Synth	Yamaha	41	93%

PRINTERS

Canon BJ-200 Bubblejet	Canon UK	46	92%
Canon BJ-230 Bubblejet	Canon UK	50	85%
Citizen 120D+	Silica	43	67%
Citizen Projet	Silica	43	81%
Citizen Swift 9	Silica	43	86%
Citizen Swift 90	Silica	51	75%
Citizen Swift 240	Silica	43	82%
Citizen Swift 240C	Silica	51	69%
Fujitsu B100	Fujitsu	43	75%
Fujitsu B200	Fujitsu	43	82%
Fujitsu DL1150	Fujitsu	43	77%
Fujitsu DL1250	Fujitsu	43	77%
Fujitsu VM800	Fujitsu	43	85%
HJ100i	Brother	49	89%
HJ400 Inkjet	Brother	52	89%
HP Deskjet 500C	Hewlett Packard	43	85%
HP Deskjet 510	Hewlett Packard	51	91%
HP Deskjet 550C	Hewlett Packard	51	85%
HP Laserjet 4	Hewlett Packard	43	90%
HP Portable Deskjet	Hewlett Packard	47	80%
KX-P1170	Panasonic	43	88%
KX-P1123	Panasonic	43	88%
KX-P1624	Panasonic	43	77%
KX-P2123	Panasonic	43	77%
KX-P2124	Panasonic	51	83%
KX-P2180	Panasonic	51	83%
KX-P2624	Panasonic	43	79%
KX-P4410	Panasonic	43	85%
Ricoh LP1200	Silica	43	90%
Seikosha SL-90	Silica	43	73%



■ Check out the colour printer round-up in issue 51.

Seikosha SL-95 Colour	Silica	51	70%
Seikosha SL-130AI	Silica	43	73%
Seikosha SP-2400	Silica	43	73%
Star LC-20	Star Micronics	43	88%
Star LC-100	Star Micronics	51	90%
Star LC-200	Star Micronics	51	72%
Star LC24-100	Star Micronics	43	72%
Star LC24-200	Star Micronics	51	78%
Star SJ-48 Bubblejet	Star Micronics	43	90%
Star XB24-200	Star Micronics	51	85%
Star ZA-200	Star Micronics	51	80%
Stylus 800	Epson	48	79%
Inkjet			

SCANNERS AND DIGITISERS

Alfadata Hand Scanner	Gasteiner	47	90%
Daatascan Professional	Pandaal	44	83%
Datel Handy Scanner	Datel	44	58%
Golden Image Hand Scanner	Ladbroke	44	90%
Naksha Hand Scanner	Naksha	44	91%
Power Scanner	Power Computing	44	90%
Videomaster	Microdeal	42	92%
Zydec Handy Scanner	Evesham Micros	44	79%

MISCELLANEOUS GADGETS AND GIZMOS

Lapcat	Arnor	43	70%
Link, The	Gasteiner	41	82%
Protector +2 Alarm	JF Cape & Son	40	63%
T-Board 64 STFM	Compo	47	78%
T-Board 68 STE	Compo	47	84%
TOS Switcher STE	Analogic	47	87%

BOOKS

1st Word User's Guide	ST Club	40	80%
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GAMES

Action Sports	Daze	45	76%
Air Support	Psygnosis	48	51%
Amberstar	Thalion	41	73%
Ancient Art of War in the Skies	MicroProse	50	86%
Archer	Virgin	43	95%
MacLean's Pool			
Around the World	Floppy Shop	42	15%
AV8B Harrier Assault	Domark	46	62%
B17 Flying Fortress	MicroProse	48	87%
Bart vs Space Mutants	Hit Squad	48	61%
Basketball (Lynx)	Atari	40	36%
Bat 2	UBI Soft	43	91%
Batman Returns (Lynx)	Atari	40	77%
Beastlord	Grandslam	51	54%
Beau Jolly Big Box 2	Beau Jolly	42	61%
Bignose The Caveman	Codemasters	43	78%
Bill and Ted's Ex' Adventure	Atari	41	14%
Blue Lightning (Lynx)	Atari	41	94%
Bubble Dizzy	Codemasters	44	58%

Bully's Sporting Darts	Alternative	49	69%
Bunny Bricks	Daze	42	25%
C			
Caesar	Impressions	42	84%
Campaign	Empire	44	20%
Campaign Missions Disk	Empire	52	79%
Captain Dynamo	Codemasters	40	76%
Carl Lewis Challenge	Psygnosis	40	50%
Casino (Lynx)	Atari	40	20%
Castles	Electronic Arts	40	63%
Championship Manager '93	Domark	49	80%
Chaos Engine	Renegade	48	94%
Chase HQ 2	Hit Squad	51	61%
Civilization	MicroProse	46	92%
Cohort 2	Impressions	47	68%
Cool World	Ocean	49	48%
Crazy Cars 2	Titus	44	20%
Creatures	Thalamus	47	65%
Crystal Kingdom Dizzy	Codemasters	47	63%
Crystal Mines 2 (Lynx)	Atari	40	83%
Crystals of Arborea	Daze	47	77%
Cybercon 3	Kixx XL	51	74%

D			
Dalek Attack	Alternative	44	43%
D/Generation	Mindscape	49	78%
Dizzy, Prince Yolkfolk	Codemasters	42	78%
Dogfight	MicroProse	52	82%
Doodlebug	Core Design	45	83%
Dragon's Lair 3	Readysoft	45	55%
Dream Team	Ocean	42	64%
Dr Fox's '92 Football Annual	Dr Fox	42	70%
Dungeon Master Double Pack	Psygnosis	42	92%
Dynablaster	UBI Soft	43	92%
E			
Elvira 2	Accolade	40	91%
Espana - The Games '92	Ocean	40	40%

F			
Falcon 1.2	Action 16	40	70%
Fire and Forget 2	Titus	45	84%
Fire Force	ICE	50	62%
Firehawk	Codemasters	48	83%
Flight of the Intruder	Digital Integration	42	90%

G			
G-Loc	US Gold	40	35%
Goblins 2	Digital Integration	43	88%
Gooch's World Cricket	Audiogenic	47	85%
Grandslam Collection	Grandslam	42	45%
Greatest, The	Beau Jolly	46	91%
Guy Spy	Readysoft	45	75%

H			
Hardball	Hit Squad	51	30%
Hard Drivin' (Lynx)	Atari	41	27%
Hard Drivin' 2	Hit Squad	52	60%
Hero Quest	GBH	47	74%
Hill St Blues	Buzz	49	71%
Hockey (Lynx)	Atari	40	82%
Hot Rubber	Titus	45	59%
Huckleberry Hound	Alternative	52	42%

I			
Indiana Jones The Last Crusade	Kixx	44	38%
International 3D Tennis	GBH	40	66%

Ishar (Falcon)	Daze	47	82%
Ishar 2	Daze	49	92%
Ishar 2 (Falcon)	Daze	52	90%
J			
Jahangir Khan Squash	GBH	41	72%
K			
Kids Pack	Alternative	44	60%
Knight Force	Titus	44	12%
Kwik Snax	Codemasters	40	79%

L			
Leeds United Champions!	CDS	42	61%
Legends of Valour	US Gold	50	82%
Lemmings Double Pack	Psygnosis	42	75%
Lemmings 2	Psygnosis	49	96%
Lethal Weapon	Ocean	43	62%
Liverpool	Grandslam	42	74%
Llamazap (Falcon)	Atari	51	91%



Lotus 3	Gremlin	41	75%
M			
Magic Worlds	Daze	41	91%
Manic Mansions	Kixx XL	49	73%
McDonaldland	Virgin	47	61%
Metallic Power	Lankhor	49	72%
MiG-29 Fulcrum	Hit Squad	49	78%

N			
Narco Police	Gremlin	40	70%
Nicky 2	Daze	50	72%
Nigel Mansell World C'ship	Gremlin	46	69%
No Second Prize	Thalion	46	87%
No Second Prize (Falcon)	Thalion	48	71%

O			
Offshore Warrior	Titus	45	22%
One Step Beyond	Ocean	51	73%
Operation Stealth	Kixx XL	49	82%
Ork	Psygnosis	40	72%

P			
Paladin 2	Impressions	42	68%
Patrician, The	Daze	50	76%
Plan 9 From Outer Space	Gremlin	40	62%
Populous & Promised Lands	Hit Squad	48	87%
Prehistorik	Titus	45	44%
Premier Manager	Gremlin	43	85%

R			
Rampage	Atari	41	62%
Rampart (Lynx)	Atari	40	86%
Rampart	Domark	42	85%
Raving Mad	US Gold	44	64%
RBI 2 Basketball	Hit Squad	46	62%
Reach for the Skies	Virgin	49	88%
Robin Hood - Legend Quest	Codemasters	46	54%

Robo-squash	Atari	41	81%
S			
Sabre Team	Krisalis	43	74%
Scrabble	US Gold	51	57%
Scrapyard Dog	Atari	41	73%
Secret of Monkey Island	Kixx XL	51	90%



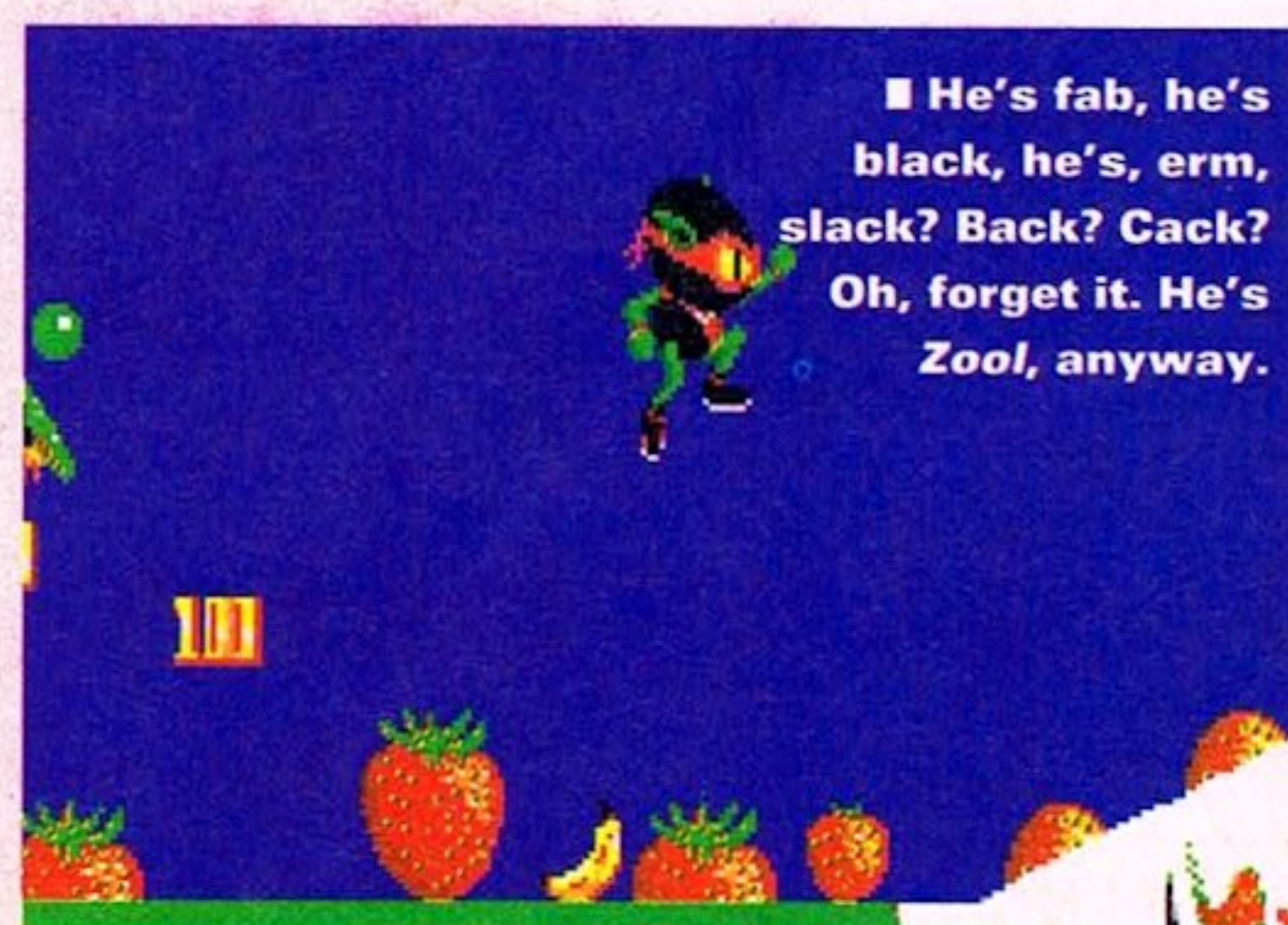
Sensible Soccer V1.1	Renegade	43	88%
Shadow of the Beast (Lynx)	Atari	40	52%
Shadowlands	Krisalis	41	73%
Sleepwalker	Ocean	47	92%
Spellbound Dizzy	Codemasters	42	71%
Streetfighter 2	US Gold	44	91%
Strike Fleet	Hit Squad	51	78%
Striker	Rage	41	79%
Striker Manager	D&H Games	42	58%
Super All Stars	Codemasters	43	65%
Supercars 2	GBH Gold	41	84%
Super Cauldron	Titus	48	62%
Superfighter	Ocean	43	52%
Super Space Invaders	Hit Squad	52	70%
Swap	Titus	45	68%
Switchblade	GBH Gold	41	88%

T			
Thomas the Tank Engine	Alternative	44	65%
Thomas the Tank Engine 2	Alternative	52	72%
Tiny Skweeks	Loricel	41	68%
Titan	Titus	45	23%
Toki (Lynx)	Atari	40	92%
Toki	Hit Squad	51	81%
Transarctica	Daze	44	79%
Transarctica (Falcon)	Daze	48	62%
Truck Racing	Zeppelin	45	69%

V			
Videokid	GBH	46	43%
Voyage Beyond, The	Gremlin	45	66%

W			
War In The Gulf	Empire	49	92%
Ween	Coktel Vision	41	79%
Wild Streets	Titus	46	38%
World Champ Boxing M'ger	GBH	41	80%
WWF European Rampage	Ocean	44	18%

Z			
Zool	Gremlin	51	89%





FEEDBACK

Is anything getting you hot under the collar to do with your ST? Then let us know

Money for nothing?

I read with interest your article in issue 50 about budget games. I would like to know whose budget we're talking about here. Out of the 50 games featured, over a quarter of them cost over £10, although admittedly two of them were compilations. Is it the case that prices will gradually soar to levels where even the cheapest and worst of games mean saving up for several months? Of the games under £10 the majority of games seem to be re-releases of full price games that flopped when they were released, or some that the companies realised would not be



any good. The re-releases of even passable games seem to cost a considerable amount, so come on publishing companies, how about dropping those prices just a tiny bit, please?

Mark Middlemist, Oxford

stf: Budget in this case obviously means budget compared to the original price of the game. Since full price commercial games are presently hovering around the £25 to £30 mark, the saving that you can make, even on a £15 game is considerable. The tag "budget" is slightly unfortunate as it does imply something that's not quite as good as it could be, however, as the commercial ST games market dwindles, recently released games come down in price quicker – take Street Fighter 2 that comes out on Kixx XL's mid-price range this month as an example. If you still feel you can't afford to pay half price for a FORMAT Gold winning game then you could always turn to Daze on ☎ 071 328 2762 who are selling classics such as Boston Bomb Club and Crystals of Arborea for £2.99 – wait a few months and more games will doubtless be added to the catalogue.

Hard done by? Not at all!

I notice that you have an advert for people who buy The Best of ST FORMAT book from their

newsagent's. Will those of us who are subscribers also receive a copy of the book?

N Blackhurst, Chester

stf: When you subscribe you can get yourself a copy of Civilisation, worth nearly £30 – that's three times as much as the value of the book because the length of the agreement is three times as long. It's anticipated however, that The Best Of ST FORMAT book will be available at a special subscriber's price in the near future – I shall be telling you all about that in your subs letter. If anyone else wants to subscribe, just turn to page 90 for all the details.

Not a very happy ending

Many thanks for publishing my letter concerning the release of Monkey Island 2 for the ST – you can't believe how totally gobsmacked I was when I opened the issue.

I wrote to LucasArts as soon as I got the address back from you and received a reply a few days ago – better than US Gold who didn't reply at all! Anyway, a Mr Khrist Brown from Product Support wrote and said:

"With respect to your creative suggestions, our legal department has cautioned us that we cannot read, review or accept unsolicited ideas. We must apply this policy consistently and hope that this policy

does not diminish your enthusiasm for our games."

So it seems that, unless they decide to release M12 themselves, it will simply never appear – which, sadly, seems to be the case.

It isn't all bad news, though, because the routines that were used for the demo are to be put into a Shareware adventure game – it might not be as polished as Monkey Island, but will hopefully come close. First, however, I have to finish my current project which is based on the graphics engine used in the PC version of Wolfenstein. So far it is looking really good and is very fast – a copy should be arriving on Clive Parker's desk shortly after Christmas.

Paul Bates, Leicester

stf: Cheers for letting us know how that turned out, Paul – and congratulations for remaining optimistic and not letting your creative spirit die down. It does seem a bit of a shame though that LucasArts won't even read unsolicited ideas – they must end up with a very narrow view of life.

We are not amused...

I have recently received B17 Flying Fortress. I was chuffed. Not just with the gameplay and the graphics but with the sound. The first two pieces of music were fascinating. Never before had I heard such

Games for every budget or games just for you if your budget's huge?



THAT JAPANESE QUESTION

Last month George Yamataga took offence to one of our captions, suggesting we were being racist. Here are some more responses to that Japanese question

The fact that racial remarks were made all the time when you were growing up doesn't make it right no matter how you cut it. As long as people do it, no matter what the intent, it will continue racism in the world. If you and your friends or my friends and I or George and his friends want to call each other racial names, then so be it; but "it" shouldn't be if we ever want to get rid of racism. And it definitely shouldn't be used in public, on a sign or a magazine or anywhere that it may be offensive to others. Full stop.

Call me sheltered, call me sensitive. Great! It's what makes me so easy to get along with.
Peter Joseph Compuserve

The point is whether the term "Jap" was meant as a racial slur. In today's politically correct atmosphere, it is taken as such, but that doesn't mean it was meant as such. If the author had said "the yellow peril" or something similar, then it would be an obvious racial slur.

In my opinion, people today are too sensitive. Recently a Black-American in Phoenix had the city change umpteen designs at the airport because if you looked at the design in just a certain way, at just the right time, with your head cocked at an angle, one of the

designs looked like "KKK." In fact it was an ancient Indian design, one that was around and accepted before the Ku Klux Klan ever came into being and had nothing at all to do with racism.

If you want to fight and win the battle against racism, fight the real issues and ignore the non issues. All you do when you fight the non issues (like this one sentence being racist) the effect is to dilute your position so much that pretty soon you have no position left, then people start to ignore you even when you have a real battle to fight. Personally, I feel that racism has always been and always will be. That doesn't make it right, it just makes it the way things are.

Lloyd Pulley Compuserve

A DIFFERENCE OF OPINION

I have just read your review of my game *MIDI-Zap* and I think there are two points which are relevant and your reviewer seems to have misunderstood. First I realise that not everybody likes the same keyboard setup, so what is simple for some is "fiddly" for others. That is why the combat keyboard is fully reprogrammable – just hit <Control><T> in solo, no enemies mode, until you like the setup, save it and load it when you start a multi-player game. The same thing goes for the weapon setups.

Second, depth of play. Well, I don't claim multi-level computer opponents with huge end-of-level guardians, but look at *MIDI Maze*, *Cold Revenge* or any of the live action lazer tag games. You see that they are set up to keep everybody playing in a learnable environment – as does *MIDI-Zap*. I agree that the sound needs work, but it does meet the infor-

mational requirements and players get too deep into the game to notice any more.

Two teams, with a couple of robot ships to spice things up is the way to play. Solo, it's just practise and setup. Every man for himself isn't bad either.

As your own caption said "Blasting up to 14 of your pals to smithereens is the best bit about *MIDI-Zap*." And that's exactly what it was designed to do. Incidentally, if you do want to blast all 14 pals, then I recommend doing it on 16MHz+ machines as the demo gets a bit slow on 8MHz STs.

You have been warned!

Don Felton
Friendly Fire Software,
Essex

stf: Thanks for that – the more information we can have about any program the better.



■ Everybody's entitled to their own opinion, especially when they vary so much between the perspectives of the programmer and reviewer.



■ Listen! You can almost hear the fire whooshing in B17. Or not.

wonderful music on the ST. You described it in your review as being "laughable." But I didn't find myself laughing. I found myself dee dah deeing it halfway through my English lesson at school. In my opinion, the sound effects are the best yet.

Jonathan Page, Cannock

stf: It's good to hear everyone's opinions of games especially if you've got some particular grievance against what we've been saying. So there – you might not laugh at B17's music either, you might sing it continually. There's always one, eh?

...but we are about this

I read your "RAM prices on the up" news story with some amusement. I don't know where you are getting your information from but as far afield as Germany, Holland and even America, nobody has heard of a shortage of chips. In fact, if you were to mention it in Germany, they would laugh.

OK, maybe a sizeable number of RAM chips did go up in smoke at the factory, but really, half the supply of the world's supply of resin to make them! Is this perhaps not another ploy of the powers that be to boost their profits – after all, chips are at a sensible price at the moment – and this will not do,

huh! Yes, prices will stabilise soon, but never again at £25 a MByte. They must think we are stupid.

R Albrighton
Stafford

stf: My, my, we do seem to have a selection of misplaced humour this issue.

With visions of Germans, Dutchmen and Americans rolling around in the aisles I enquired of roving reporter Clive Parker where indeed he got his information from, and R, it seems that the last laugh is on you.

Our information came, in fact, from America in the form of the Silicon Times Report, a weekly international on-line magazine available on the Genie and Compuserve bulletin boards. I have also seen news of this fire in specialist computing magazines as diverse as sister mag Edge and the PC and mainframe orientated Computing magazine.

ST Report confirmed that this plant was the source of over 50% of Epoxy used in the manufacture of SIMMs – just take a look through the ads in this issue and you can see that manufacturers are requesting that you check in advance how much your SIMMs are going to cost because they're going up so much the prices printed are likely to have changed.

We do admit, however, to having made one mistake in this story – the company concerned was, in fact, Sumito Chemicals Ltd, not Matsushita Electric. Apologies to them.



Not a con

I feel as if I'm close to being ripped off! Why? Well, like most people I was impressed

with the quality of *Prism Paint* given away recently on your Cover Disk. I was so impressed that I sent away for the upgrades, and then I waited, and waited...

Absolutely nothing has come through the post, not even a hastily written compliments slip saying "we're terribly sorry but the upgrade is taking longer to complete than we thought" or some such excuse. This really isn't good enough – it's bad enough that we get ripped off by mail order sharks without then being ripped off by companies actually promoted by the magazines.

Darren Smithson, Reading

"I don't know where you are getting your information from but nobody has heard of a shortage of chips"

stf: Sorry, Darren, that you've been kept waiting. We got in touch with 16/32 Systems about this problem and they told us that demand for the v1.5 upgrade and the manual had exceeded their expectations and they had had to wait for another shipment from the States, which arrived a couple of weeks ago. You should now have your v1.5 upgrade. *Prism Paint* v2 isn't ready yet – and that's why you haven't received your upgrade for that part of the deal.

Get creative!

Orbital Software are looking for some new programmers for a large project. If you have written programs in *STOS Basic*, however good or bad you may think they are, then get in touch with us at the

following address and we'll send you more details.

Orbital Software,
19 Melbourne House,
Berrowside Road, Shard End,
Birmingham, B34 7JN

stf: If you think you would like to help Orbital Software out, get in touch – and good luck!

Praise for Atari

Well, strike me down with a feather duster! Atari have released a nice piece of kit that people are talking about! I read with interest the article on the new Jaguar console in *STF's* sister magazine *Edge*. It certainly does appear to kick the bit out of 3DO. However, I couldn't help but notice *Edge's* cynical attitude concerning the first Jaguar games to be released. OK, so they don't all use prerendered raytraced graphics with zero gameplay like so many new CD-based titles, and they may not appear to use all of the Jaguar's brilliant abilities.

I believe that 3DO are too ambitious, unlike Atari, and seem to want to get as many of these rendered games out as possible. Some people may be put off by horrifically complicated looking games at first, so Atari have included a few SNES/Mega Drive-esque games in the catalogue like *Tiny Toons*, *Raiden* and *Kasumi Ninja*, along with some smart looking games like *Crescent Galaxy* and *Aliens vs Predator*.

Stuart Johnson, Warley

stf: Thanks for that, Stuart – it's always reassuring to hear that people think Atari are doing something right.

If you have anything you'd like to let off steam about, write to Paula Richards, Feedback, ST FORMAT, 30 Monmouth Street, Bath BA1 2BW.

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Atari UK	0753 533344		010 508 792 6618
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Coktel Vision	010 331 46 30 99 57	Millennium	0223 844894
Compo Software	0480 891819	Mindscape	0444 246333
Compuserve	0800 289378	Mirage	0260 299909
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Fujitsu	081 573 4444	Star Micronics	0494 471111
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	010 1 303 791 6098	System Solutions	0753 832212
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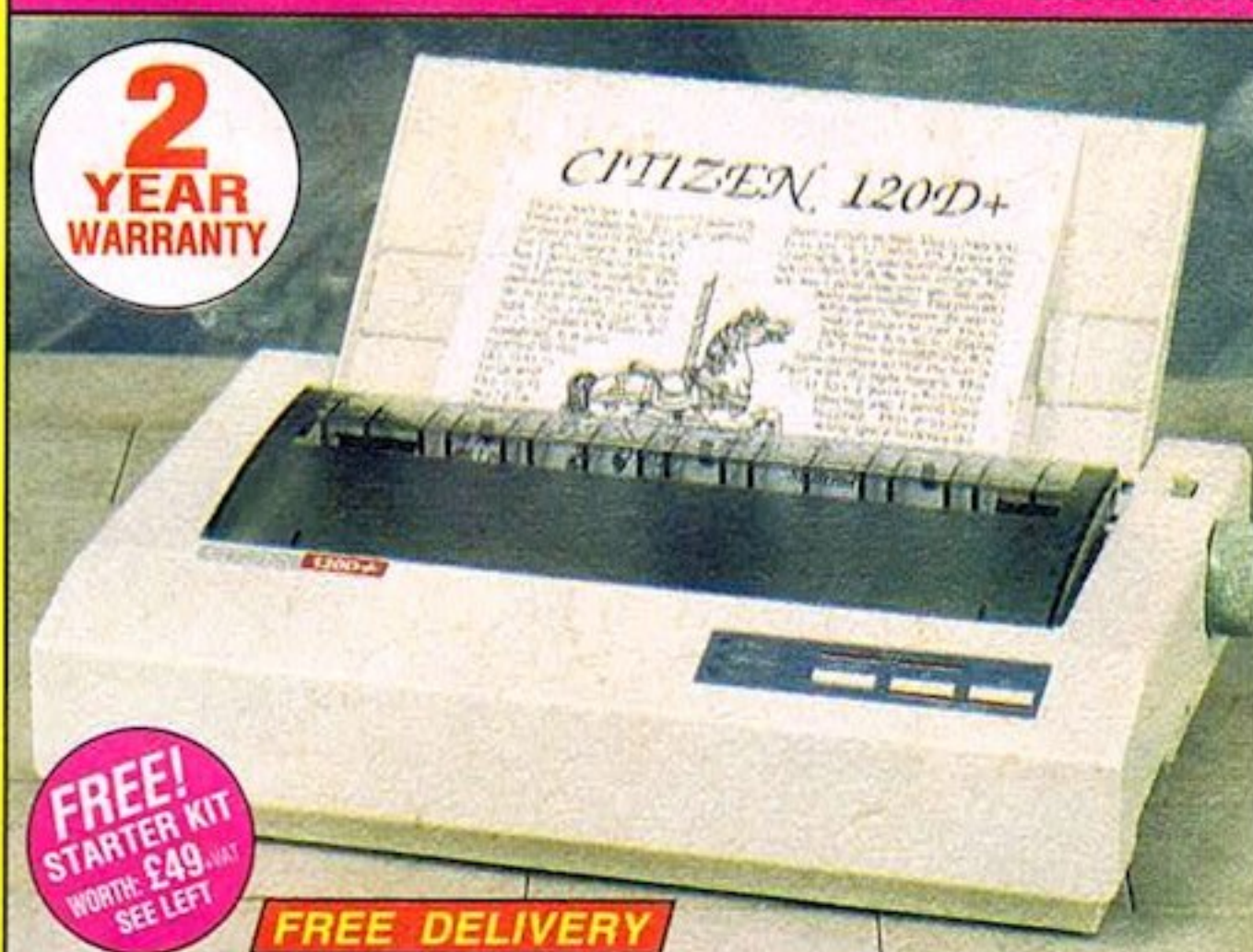
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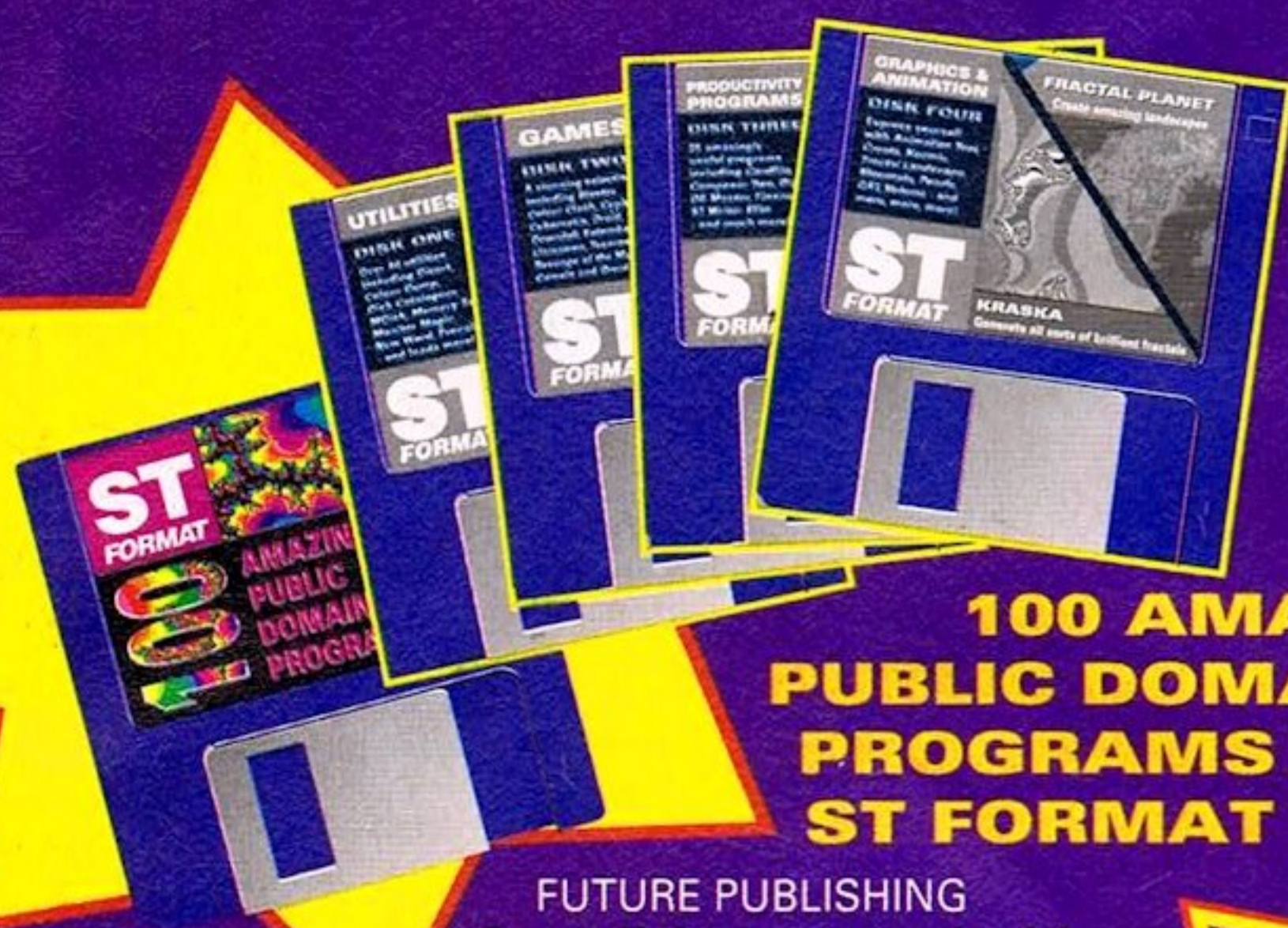
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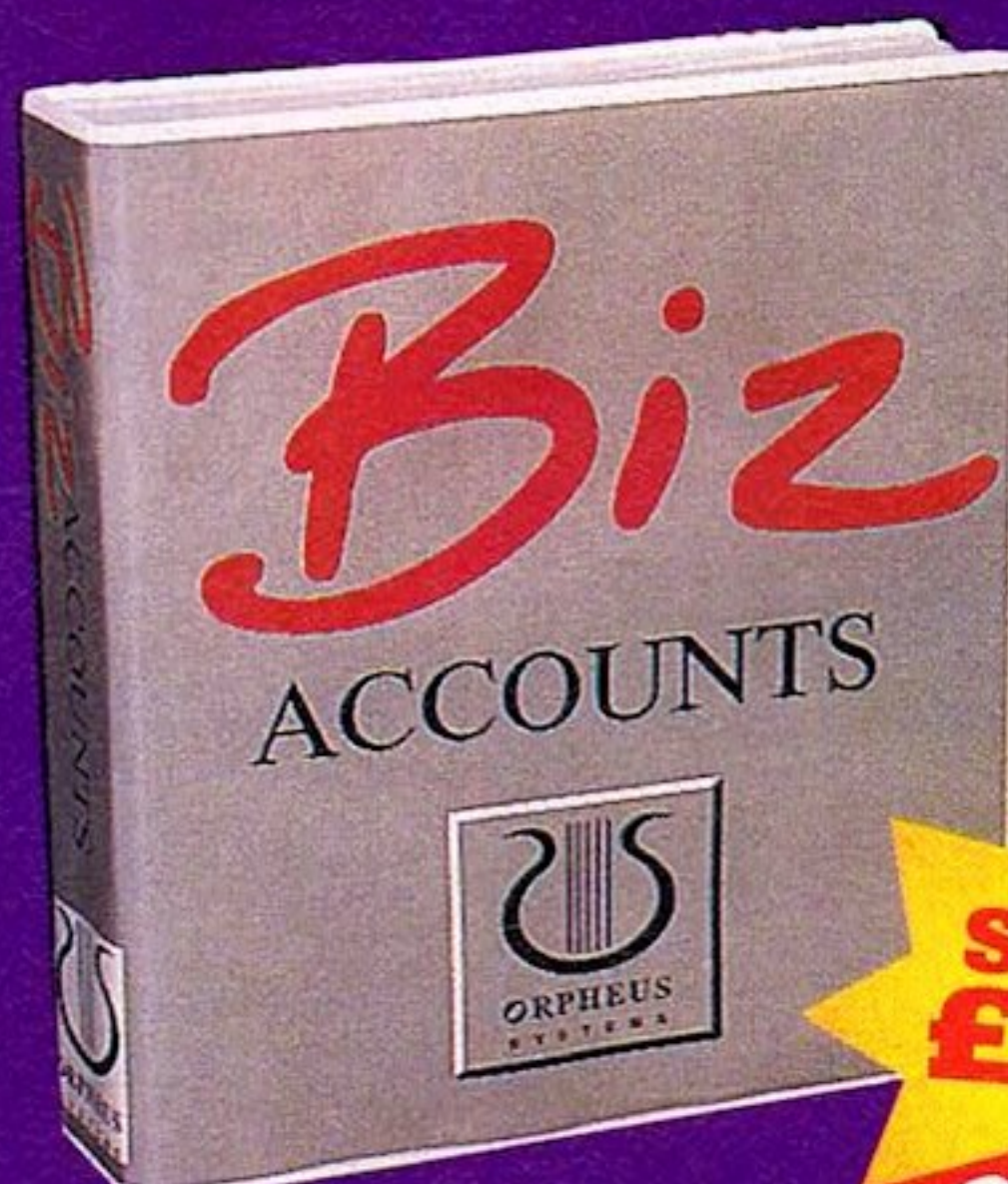
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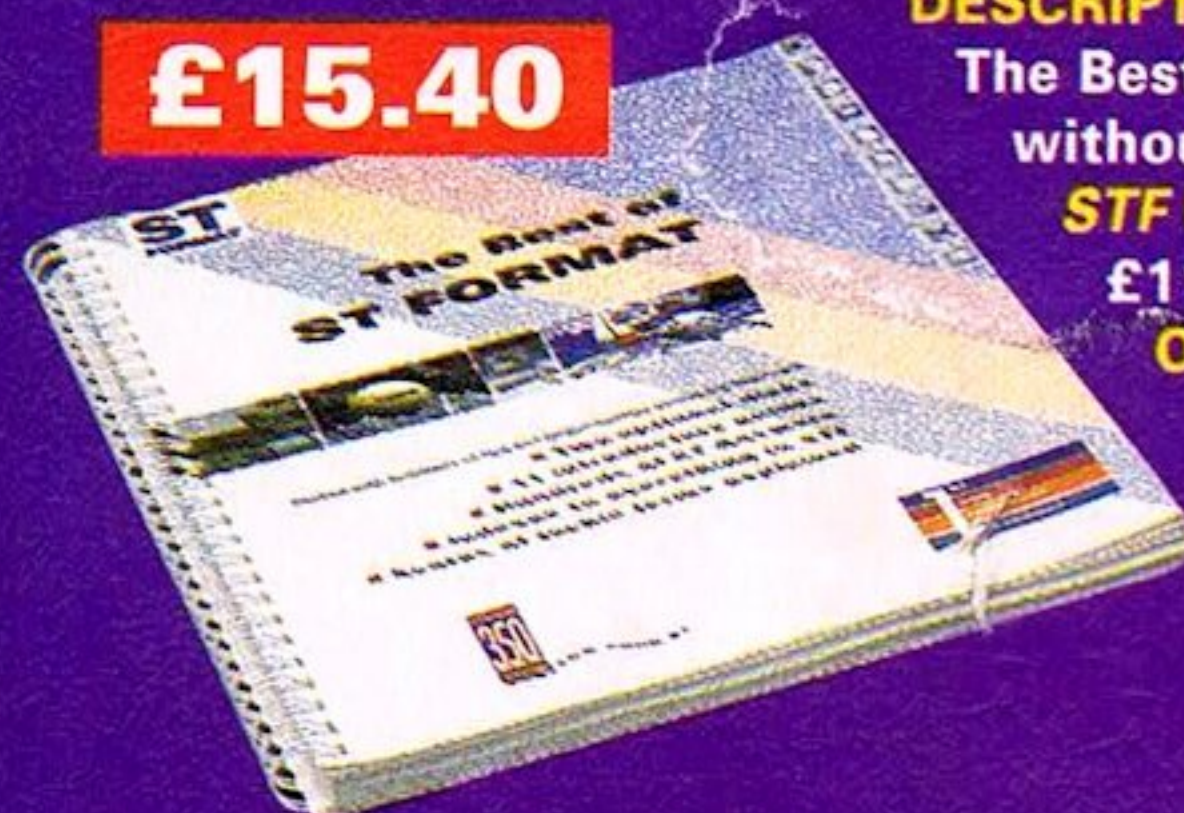
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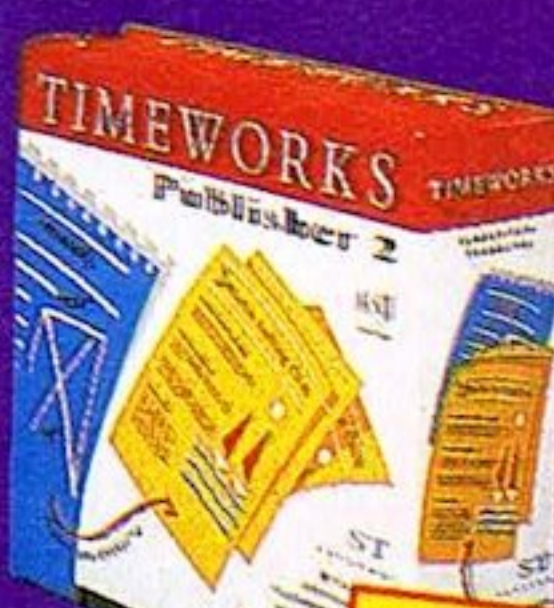
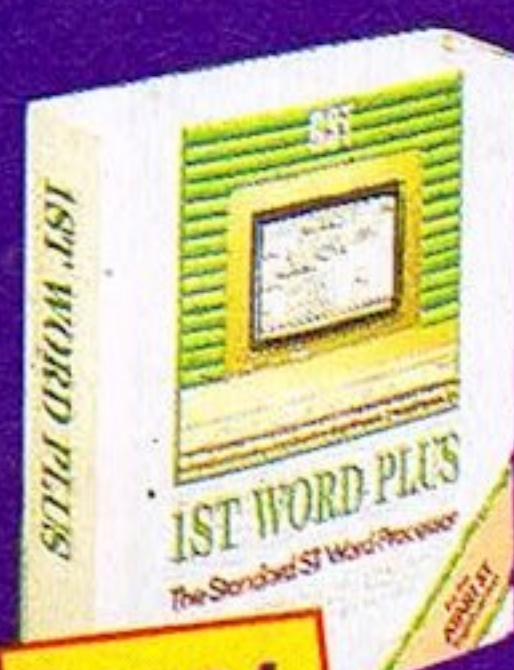
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PIXEL PAINTING

Supernovas flare into being, casting their light as the centre of the galaxy begins to self destruct. Time is running out, so look at these pics

Perspective is difficult enough to convey on paper let alone on screen using a paint program, the best

picture sent in this month is a beautifully executed *POV* raytracing showing the true power of the program and its ability to create

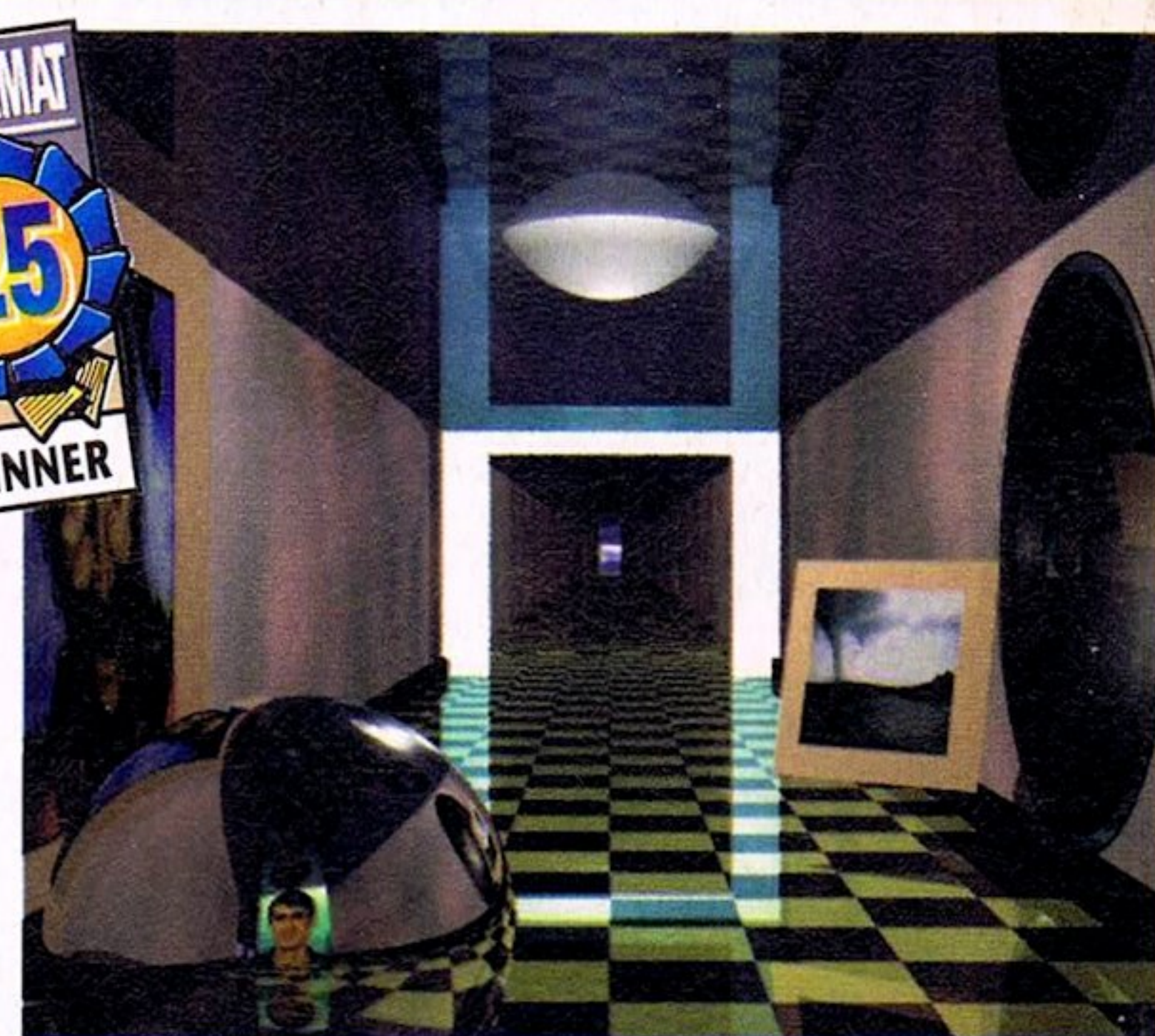


ST THOMAS HOSPITAL
■ Our second place picture is a grayscale drawing of St Thomas Hospital created by Tim Elliot of London using Paintworks. Again, excellent use of perspective and painstaking attention to detail shows what you can achieve using the ST. Although it looks like a high resolution monochrome image the picture is actually drawn in low resolution colour.

stunning visuals. The picture was created by **Jose L Ferrer de Eugenio** of Sevilla in Spain.

Unfortunately Jose neglected to give us details of how he went about designing his picture, but we can tell you that the version shown here is a massive 640x480 true colour Targa that uses over 900K of disk space. Jose has imported two pictures created in *Deluxe Paint* to act as the paintings on the wall.

If you have an artistic bent, then get those pixels organised, send your entries to Pixel Painting, *ST FORMAT*, 30 Monmouth Street, Bath, BA1 2BW. Please send your entries in either *Degas*, *Neochrome*, *Spectrum 512*, *Targa*, *TIFF* or *GIF* formats – Clive incinerates any other type of file in the furnace when he's being picked on at deadline time. **stf**



PICTURES AT AN EXHIBITION

■ "The way the artist has used light in his composition is remarkable; the shadows, the reflections, the contrasts, the way the light fitting floats just below the ceiling without a cable. Utterly delightful. It reminds me of the days when I was a caretaker in the Tate Gallery, miles of empty corridors and the occasional heap of bricks to chuck in the skip. I was sacked soon after that."

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Technical Editor Clive Parker
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Art Assistant Sarah Sherley-Price

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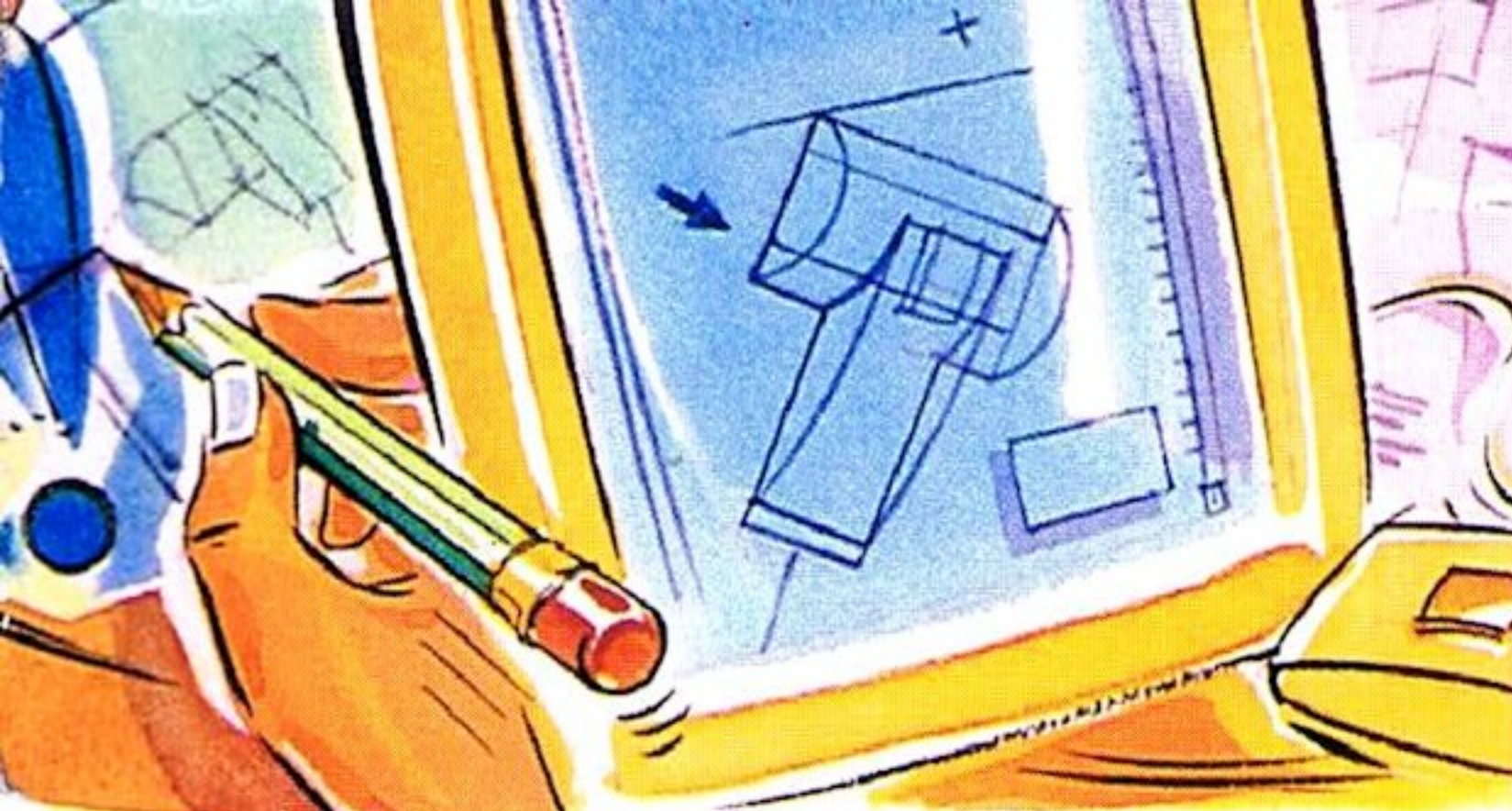
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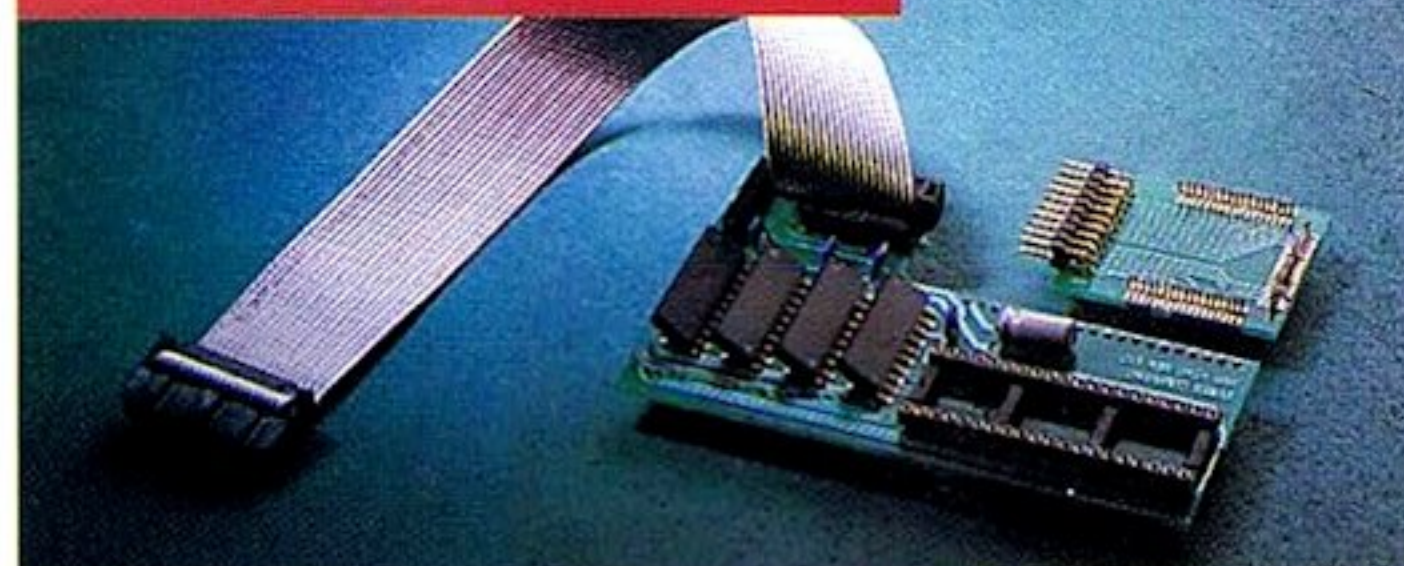
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super mon

SuperMon comes with all the features of the 'Ultimate Cartridge' and more. Some of the features included with SuperMon are: Program Switcher- allows two programs to be in the memory simultaneously and switched between at the touch of a key, Printer Spooler- allows files to be printed at the same time as other tasks, Comprehensive Debugger- disassemble programs and step through them, intercept OS calls, search memory or find where a routine is called from automatically, Diagnostics Function- check the internal functioning of your ST disk analyser, custom format disks, read/write sectors, hide files, Utilities- the SuperMon also has many utility functions available, including reset proof RAM disk, mouse trap function, time display, screen snapshot and 50/60Hz display toggle.

Ultimate Cartridge£25
Including SuperMon.....£35

2mb ram board



The Atari RAM Board requires no soldering and plugs directly inside the ST using the latest capacity RAM chips. Full fitting instructions are supplied. The ST RAM Board is available either as a 2MB or 4MB RAM expansion.

£99

4MB RAM Expansion£169
1MB SIMM for STE£35
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order form



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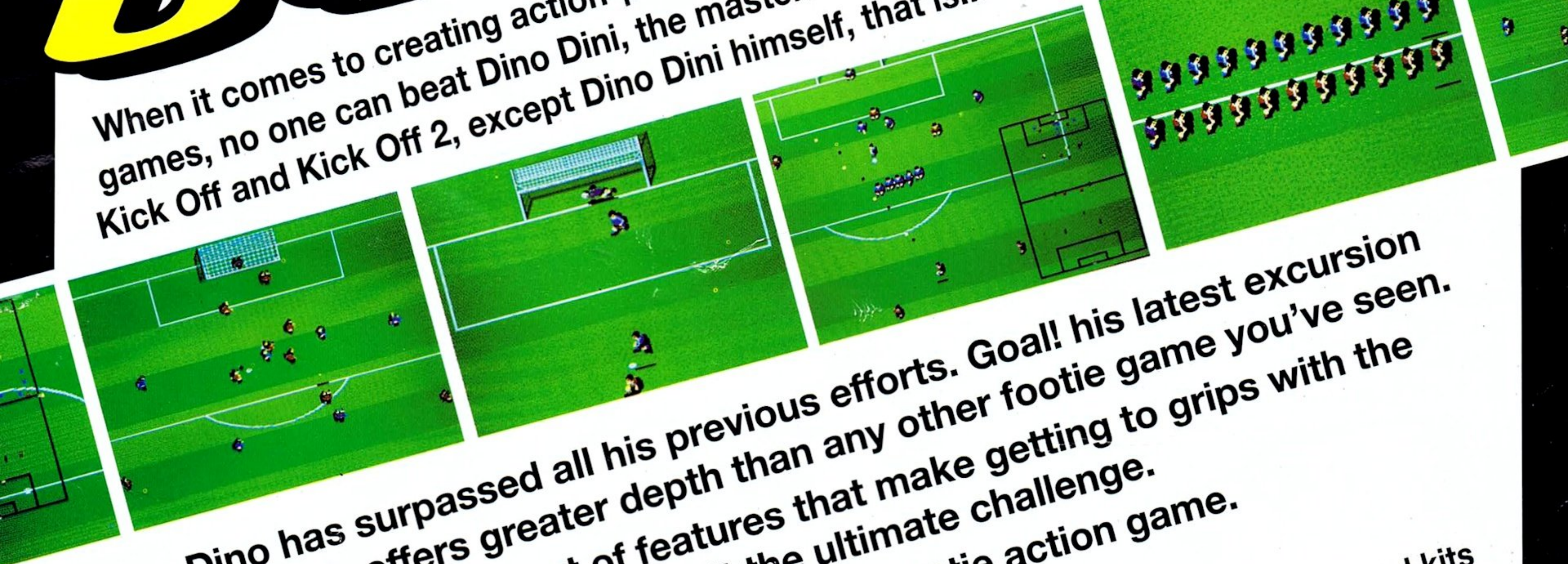
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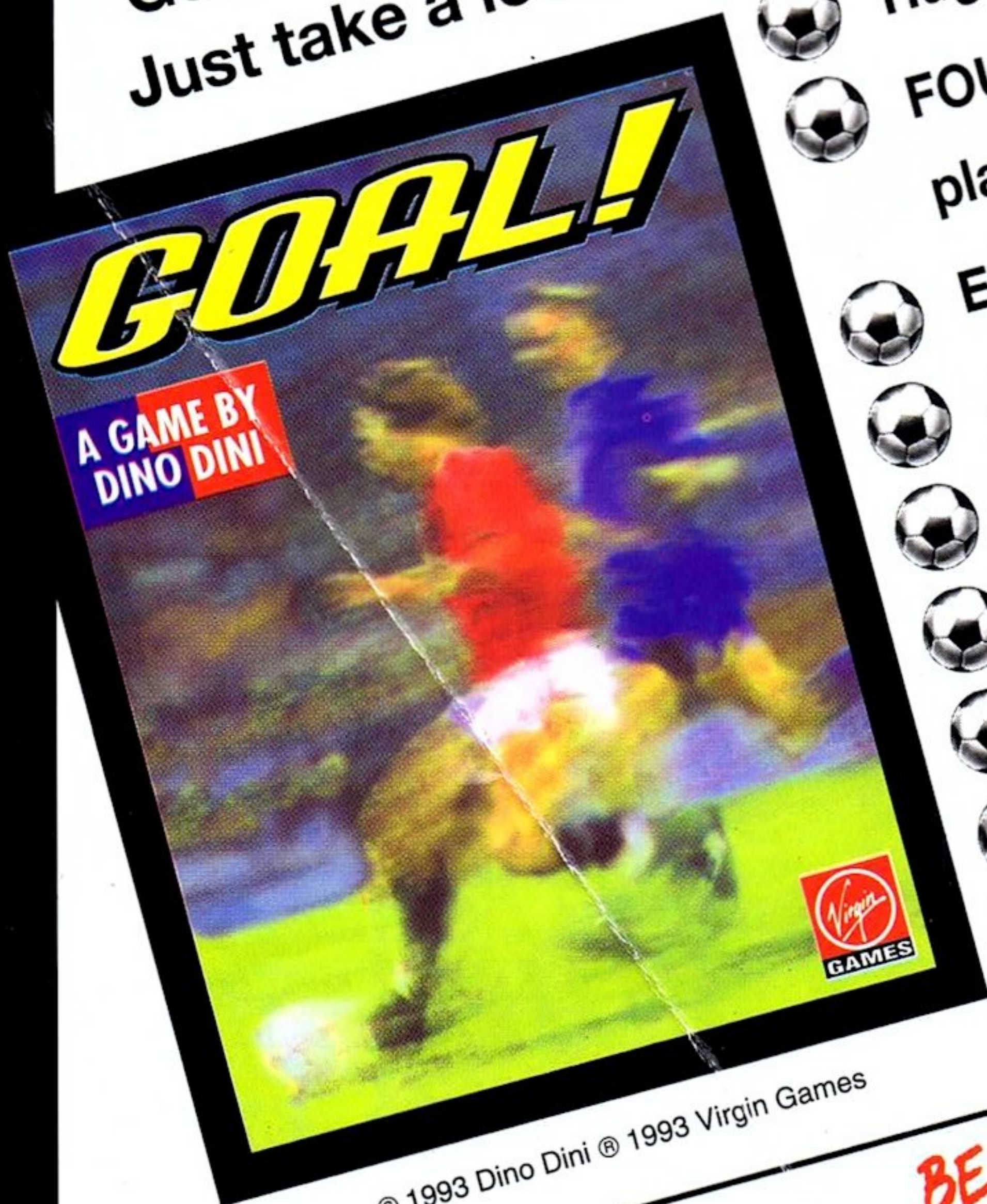
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